DECEMBER, 1959

THE Lumberman

LUMBER PLYWOOD BOARD WOOD MANUFACTURING

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How Two Mills Upgraded Operation Pgs. 36, 38

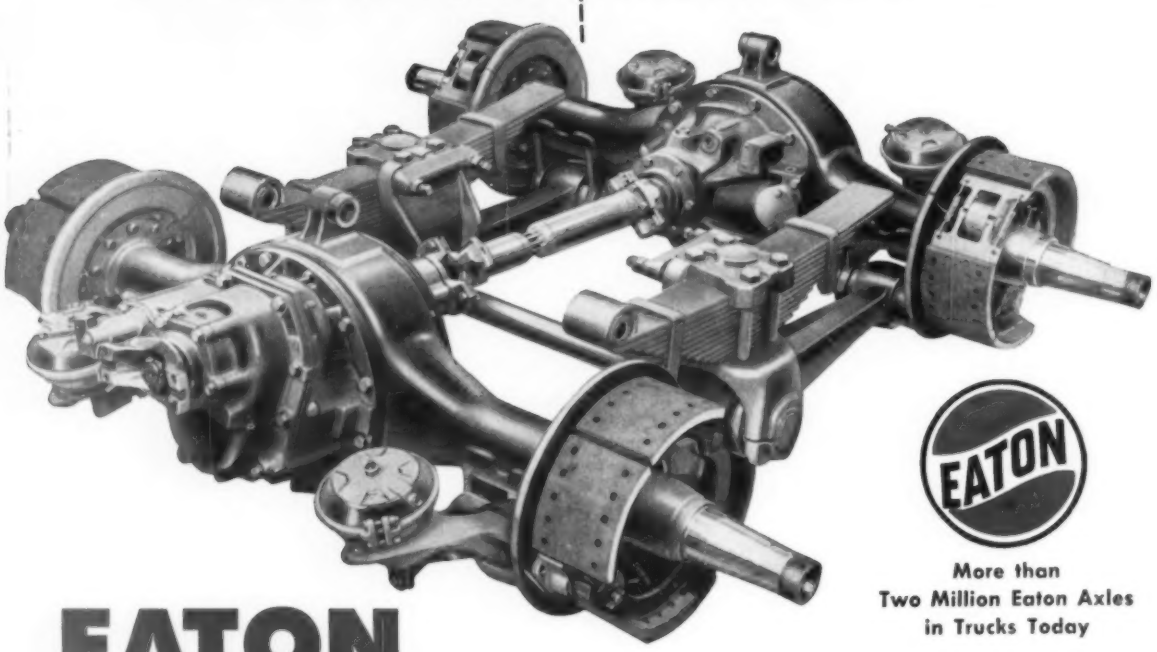
New Developments for Easier Handling of Packaged Lumber Pg. 42

Particle Board Plant Operates on Hardwood Pg. 62

30D SERIES

42D SERIES

Two New Additions to the Expanding Line of



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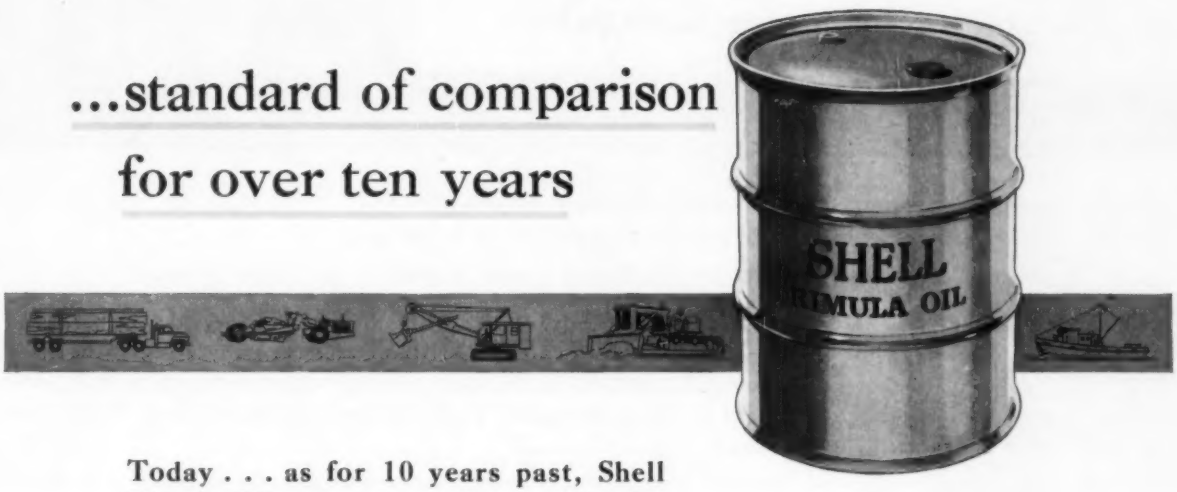

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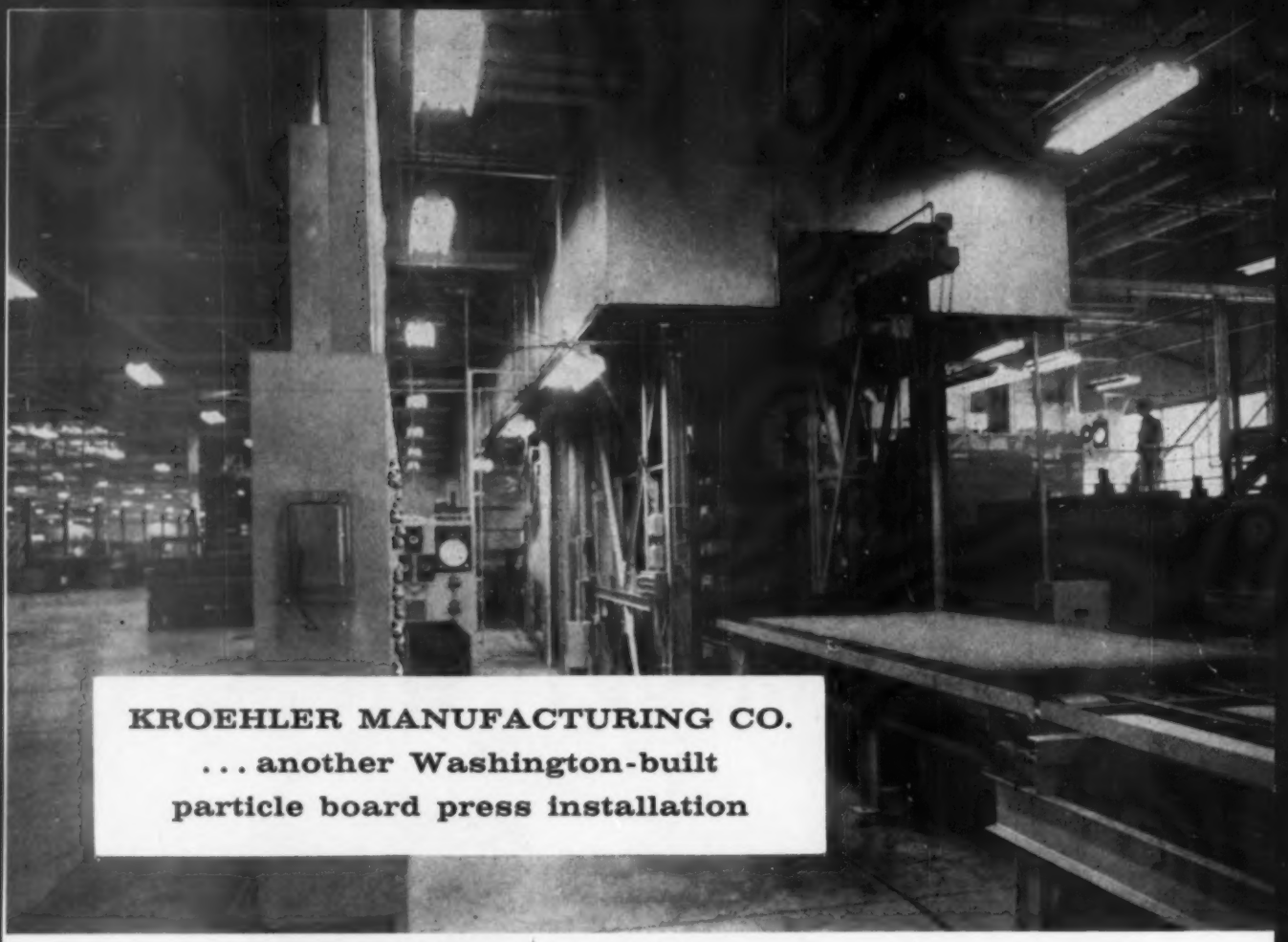

KROEHLER MANUFACTURING CO.
. . . another Washington-built particle board press installation

The entire Kroehler plant operation is controlled by three men at three central control stations . . . one of which is the curing stage shown above . . . producing "an acre of board" every 24 hours. Through the 8-opening Washington hot press are processed 46,000 board feet per day, on a 1-inch basis. With a temperature of 400° F and a pressure of over 2,000 tons, this press produces a complete range of thicknesses, from 1/10" to 1", and densities, from 46 lbs. to 70 lbs.

LOCATION: Meridian, Mississippi

PLANT ENGINEERS: Miller Hofft Inc.

PRODUCT: "Cultured Wood" FIBER PARTICLE BOARD

A new fiber particle board manufactured by the Emerite process has begun to roll off the production line in the new $5 million Kroehler plant. The ultimate use of the new product will be for furniture building board ranging from thin panel hardboard to lumber density core stock for Kroehler's bedroom and dining room furniture.

"Furnish" from Kroehler's adjoining dimension and case goods parts operations is transformed into the new "Cultured Wood" board in the closely integrated and highly automated board producing facility. The Washington press, with its automatic loading and unloading features, turns out 5′ x 10′ panels in a full range of thicknesses and densities.

This is the eighth plant in which the independent engineering firm of Miller Hofft Inc. has specified Washington press equipment, sufficient testimony to the ability of Washington Iron Works to provide production equipment engineered and built to the exact demands of product and process. You can get the answers to key questions about efficient and economical board production by writing Washington Iron Works, 1500 Sixth Avenue South, Seattle 4, Washington.

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SPECIAL HYDRAULIC PRESSES • AUTOMATIC PRESS LOADERS AND UNLOADERS
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and ACCESSORY EQUIPMENT

VOLUME 86 • NUMBER 12

DECEMBER, 1959

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THE Lumberman

LUMBER PLYWOOD BOARD WOOD MANUFACTURING

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12 Ways to Help Solve the Seasoning Controversy 32

Southern Mill Increases Volume and Grade. A ten-year modernization program has worked out successfully for C. Arnold and Son, Cullman, Ala. 36

Better Utilization: Key to continued profitable operation of the medium-sized mill, requires upgrading of equipment. Here are some changes made at the California pine mill of Scott Lumber Co., Burney, Calif. 38

Centralized Barking and Block Cutting System handles over 350,000 feet of logs per day for Robert Dollar Co., Glendale, Ore. 40

New Developments in Packaged Lumber Handling. Three methods developed that can be adapted by many mills. 42

How Two Firms Handle Strapped Loads of Logs. Simpson Logging Co. uses an electric unloader to handle truck loads safely at Shelton, Wash.; Potlatch Forests, Inc., at the Rutledge Unit, Coeur d'Alene, Ida., utilizes a crane to simplify loading, unloading and storage. 44

Thickness Sorter Relies on Memory Panel and requires only two men to operate in the Dorris Lumber & Moulding Co. plant, Sacramento, Calif. 48

Plywood Problem: How to Sell 9.2 Billion Feet in 1960. 58

How Winton Lumber Co. Plywood Plant Operates. New plant at Martell, Calif., has 3½ acres under roof, a vast bank of steam tunnels, movable lights, latest equipment and, on two sides, an air space between side walls and roof shell. 60

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significant industry news

General Outlook . . .

RUSSIA STRESSES QUANTITY . . . George A. Garratt, dean of the Yale school of forestry and a member of the 7-man team of industry experts that visited Russia, makes these observations: In Russia's 7-year plan to boost industrial output, emphasis in the forest products industry has been on quantity, not quality, mechanization rather than technology in wood use. Goal of the 7-year plan is to increase output in virtually all categories of wood products. 1958 output of sawed lumber was 34 billion feet vs. 40 billion in the U. S. Garratt says USSR forests cover about 2.8 billion acres vs. 784 million in the U. S. Russian forests are mostly softwoods. Its hardwood stands are much less than American, both in intensity and diversity of species.

U. S. PLY ADDS TO DISTRIBUTION . . . Cascades Plywood Corp., Portland, Ore., has contracted to provide the U. S. Plywood Corp. distribution system with additional production which within a few years will amount to 4.5 million feet a month. The production, mostly larch, will come from Cascades' recently acquired plant in Polson, Mont. U. S. Plywood has for 15 years marketed the entire output of the Cascades mill in Lebanon, Ore., one of the largest in the world. U. S. Plywood says it purchases from outside sources approximately two-thirds of the amount it sells.

FOREST PRODUCTS WEEK? . . . The newly organized Canadian Wood Development Council has passed a resolution recommending a National Forest Products Week in Canada. Speakers said "weeks" are staged for causes less important than wood. An effective program could be developed by the industry to take advantage of the emphasis created by the federal government should the latter adopt the suggestion. Ted Smith, Huron Forest Products, Ontario, was re-elected president of the council during the meeting held at Harrison Hot Springs, B. C.

ELECTRO-KILN DRYING . . . The Army Ordnance Corps reports good results in tests on drying black walnut gunstock blanks by a new electro-kiln method. The blanks were dried from a moisture range of 10 to 14% to a range of 4 to 6% in only a few hours. In this new application of dielectric heating, power is supplied by a radio frequency generator and the heat radiates outward from the core of the wood driving internal moisture before it to the surface.

MORE PIGGYBACK SERVICE . . . Atlantic Coastline Railroad Co. plans to provide piggyback freight service between Jacksonville and Atlanta. Initial service will be four trailers piggybacked on two flatcars. Within a year the railroad plans full trainloads of 50 flatcars each carrying two truck trailers. Piggyback loading ramps will be built at various Florida points. The railroad piggybacks truck trailers in six southeastern states.

GROUP TO FIGHT MOULDING IMPORTS . . . The Southwest Pine Association voted at its annual meeting to cooperate with other parts of the Western Pine industry in trying to obtain relief through the courts from the competition of Mexican moulding which has been estimated at 35 cars a month, and increasing. The court action would probably seek to classify the moulding imports as "other manufactures of wood" subject to a 17% ad valorem duty.

More INDUSTRY NEWS on Page 12

Know your AIM*. . . Pittsburgh Plate Glass does . . .

Packaging Lumber Speeds Unloading and Handling

Acme Idea Man H. W. McCurry serves Acme Steel Company customers with new handling and packaging ideas.

The Pittsburgh Plate Glass Company of Henryetta, Oklahoma, is now receiving shipments of packaged lumber in box cars. This new technique speeds materials handling and permits important economies from time of arrival to production line use. (Idea No. U1-19)

The lumber is packaged at the mill, then loaded into box cars and braced by the interlace securement method, using heavy-duty Acme Steel Strapping. The shipment arrives at Pittsburgh Plate Glass Company in excellent condition, ready for fast unloading with mechanical handling equipment.

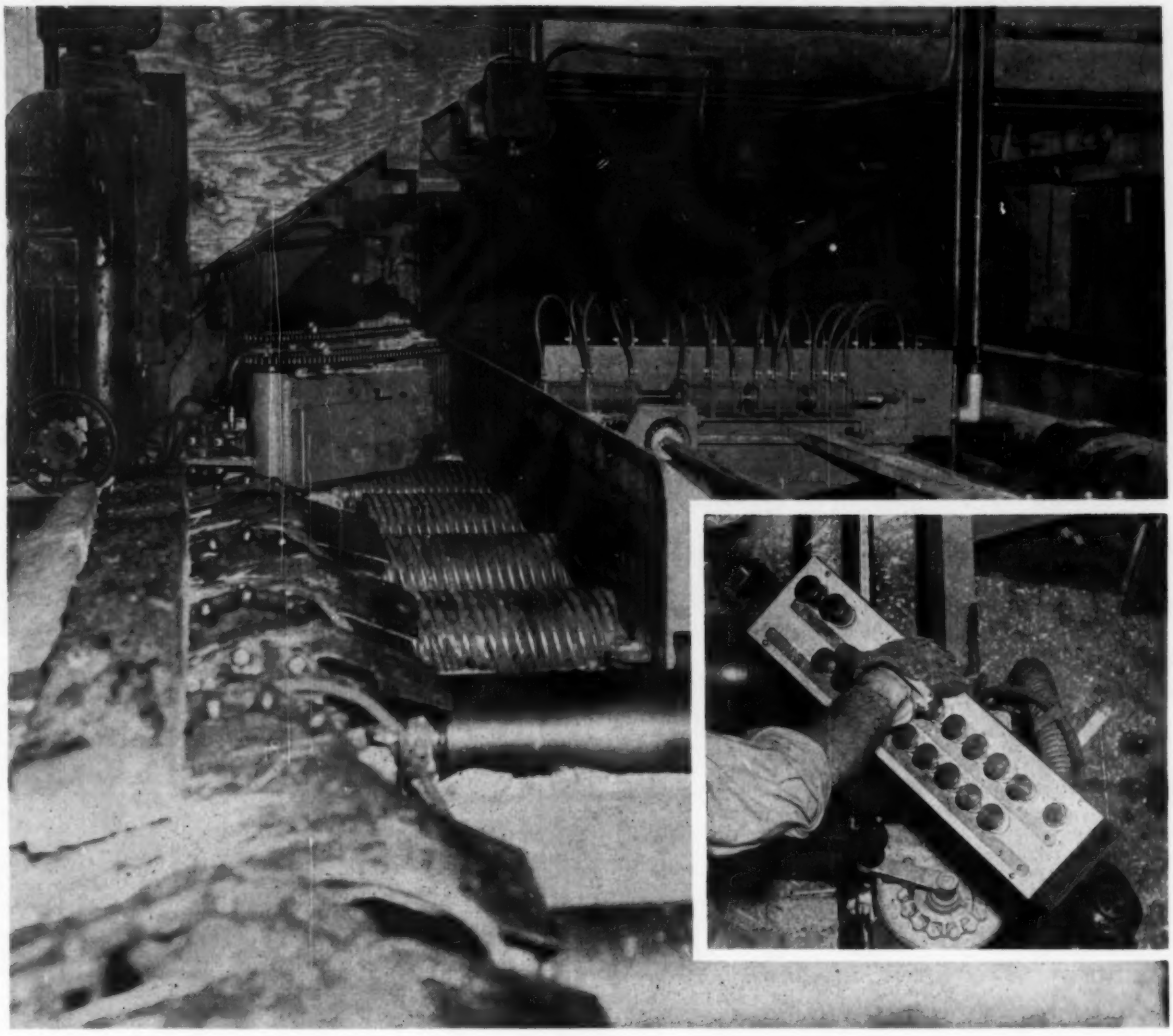
Savings gained from mechanical unloading are further increased by production economies. Formerly, lumber sizes were manually selected for production use. Packaging the sizes of lumber in the sequence they will be used on the production line has eliminated manual handling.

***Know your Acme Idea Man.** He will work with you to help improve handling of your incoming supplies. Call him at your nearest Acme Steel office or write Dept. LBU-129 Acme Steel Products Division, Acme Steel Company, 1025 Sixth Avenue South, Seattle 4, Washington. Also Portland, Oregon.

ACME STEEL **STEEL STRAPPING**

You get accurate, effortless control with this PORTLAND IRON WORKS

PUSH BUTTON LINE BAR!



Here is the push button remote controller in action at Georgia-Pacific in Toledo, Oregon. Air cylinder-operated set works is shown in the rear.

Resaw line bars are available with manual or remote control with or without pre-selection . . . at PORTLAND IRON WORKS, pioneer in automatic controls for lumber manufacturing.

Additional information available. Call, write, or wire.

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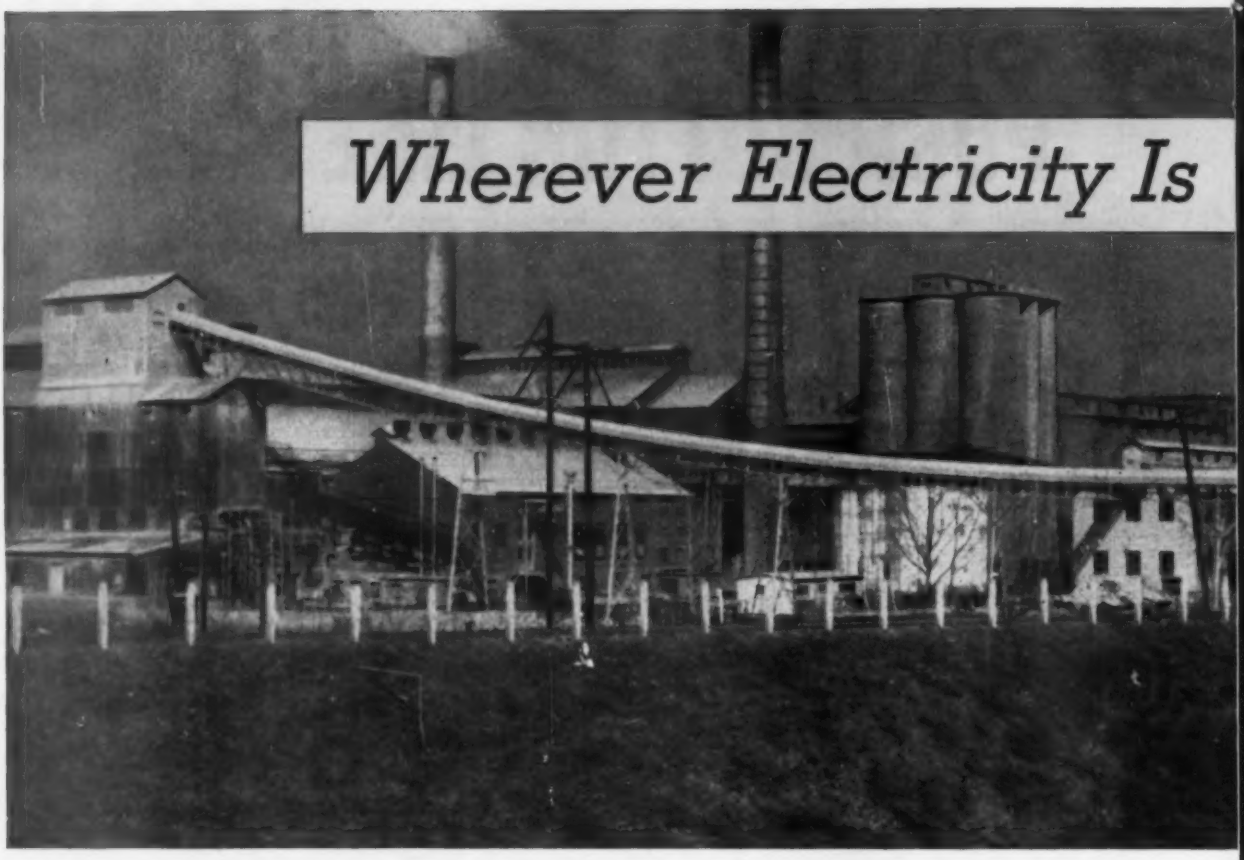

HALF-MILE CONTROL PROBLEM!

One man, stationed at a pushbutton panel, has complete electrical control of the operations in this midwest limestone mine...and that includes control of the conveyor line and the bin-loading operations a half-mile away!

In the early planning stages it appeared that DC power would be a "must" for such a control system. Several electrical equipment manufacturers confirmed that belief. Square D was called in and, working closely with engineers from both the mining company and the conveyor manufacturer, developed an AC control system which met every requirement. In addition, it (1) eliminated the cost of generating DC power, (2) saved more than $10,000 in installation costs, and (3) effected a continuing savings in the use of AC compared with more costly DC power.

Here, from Square D's files, is another example of the kind of teamwork which helps America *work better and live better—electrically!*

EC&M HEAVY INDUSTRY ELECTRICAL EQUIPMENT...NOW A PART OF THE SQUARE D LINE

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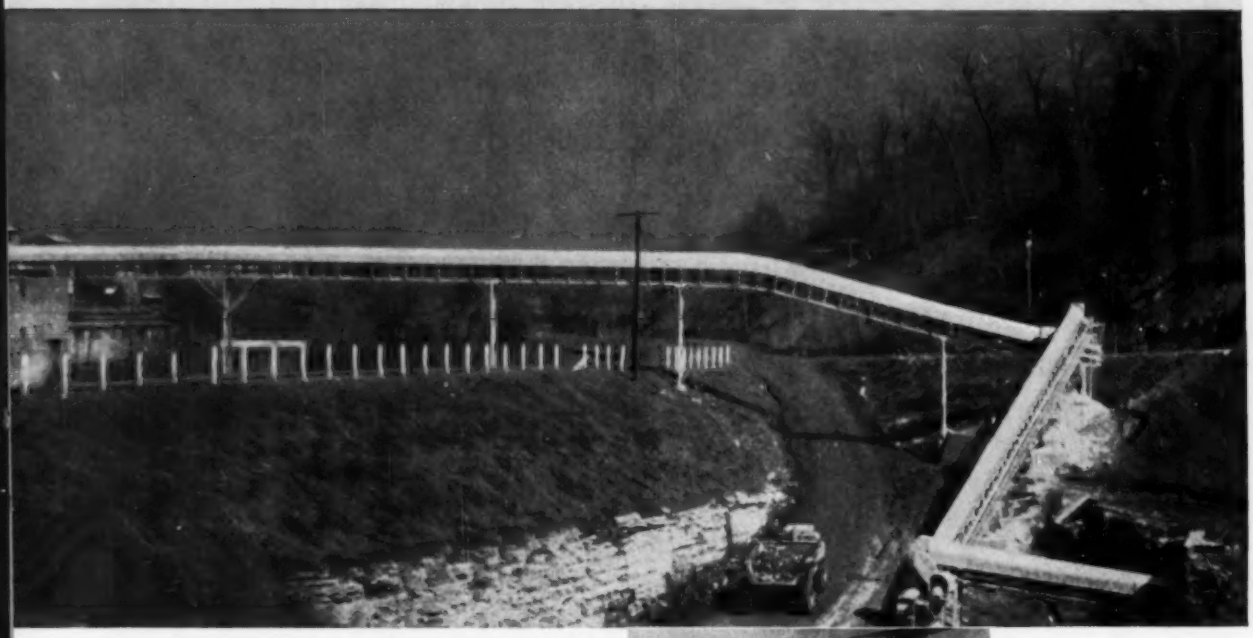
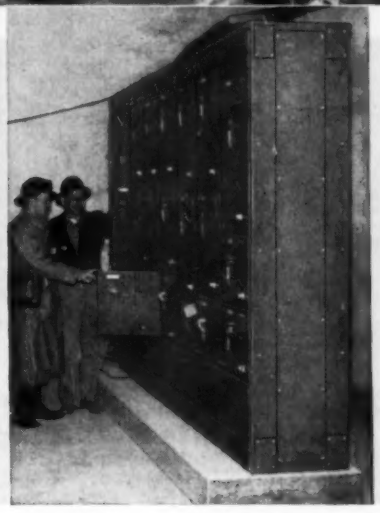


Above—through this bank of pushbuttons, located within the mine, one operator can control all mining, conveying and processing operations. Notice the closed circuit TV (at left) which gives the operator a constant view of the loading bins, a half-mile away. This enables him to switch bins instantly, as they are filled.



At left
one of the three Square D control centers which respond to the pushbutton commands of the operator shown at left. A Square D unit substation and high voltage starters also are a part of the complete system.

Field Engineering Service is available through more than one hundred Square D offices, backed by an international network of over 1000 authorized electrical distributors and 19 plants in the United States, Canada, Mexico and England.

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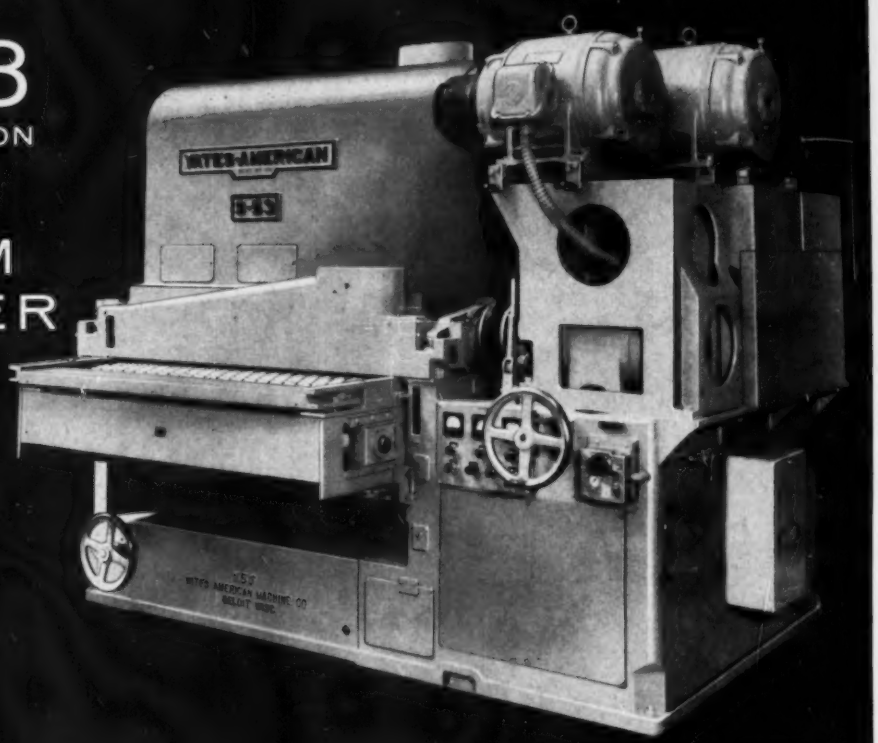

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ALL TYPES AND SIZES OF WOODWORKING EQUIPMENT... LARGE OR SMALL

FOREST RECREATION RESEARCH . . . The first forest recreation center in the United States has been established at Warren, Pa., by the U. S. Forest Service, and will be under the direction of Hubert D. Burke. The center will be responsible for recreation and wildlife research for the northeastern states and for forest management studies in the Allegheny Plateau. Studies will be undertaken to attempt to solve the problems brought about by the rapidly growing demands for recreational use of forest lands.

DIAMOND NATIONAL SALES CLIMB . . . Sales in the first nine months of 1959 total $168.8 million vs. $152.5 million in the same period of 1959, Diamond National Corp. reports. Net earnings are $7.6 million vs. $6.8 million a year ago. Figures are adjusted to reflect the recent merger of Diamond Gardner Corp. and United States Printing & Lithograph Co. to form Diamond National Corp.

At the Plant Front . . .

U. S. PLYWOOD BUYS OREGON OPERATION . . . U. S. Plywood Corp. has purchased all Oregon assets of Western Battery and Separator Co. This includes 2800 acres of timberland, The Coon Creek Lumber Co. sawmill, Webco Veneer and Western Handle Co., all in the Roseburg area. Future plans for the plants have not been announced. U. S. Plywood indicates it wishes to integrate them with its operations in Roseburg.

OREGON PLY PLANT BOUGHT . . . Two of the plywood industry's largest sheathing plant operations are now in the same ownership with the purchase by Plywood Products Corp. of Corvallis Plywood. Both plants are in Corvallis, Ore. Corvallis Plywood is renamed Benton Plywood and continues to operate. Plywood Products, with an annual capacity of over 190 million square feet a year, is the world's largest plywood sheathing plant.

NEW LOUISIANA MILL OPERATING . . . Hunt & Sons Lumber Co. has started production at its third sawmill in Louisiana, a band operation located south of Jonesboro. The operation includes a planer and dry kilns. Output of this plant, together with Hunt operations at Danville and Zwolle, totals about 60 million feet a year. A. T. Hunt, Sr., is president of the organization which also includes Hunt Lumber Co., Inc., for sales.

SOUTHERN PREFAB HOME FIRM . . . Southern Home Manufacturing Corp. has been established at Tifton, Ga., to manufacture pre-fabricated homes for distribution mostly in Florida and Georgia. The firm is headed by Lee A. Everhatt, Tallahassee, Fla., who is active in a similar enterprise in Tallahassee.

NEW GEORGIA SAWMILL . . . Longleaf Lumber Co. is building a new sawmill on a site between Lumpkin and Richland which when in production early in 1960 will have an output of 50,000 feet daily. The operation will include a battery of kilns and a wood treating plant. Benson M. Jones is president of Longleaf Lumber Co.

FIR PLYWOOD PLANT IN MIDWEST . . . The first fir plywood plant east of the Rocky Mountains has been established at Walworth, Wis. The firm is Walworth Plywood Co. and is headed by Earl M. Spiro who recently resigned as president of Triangle Plywood Co., Winnetka, Ill.

AMERICAN PARBOARD SOLD . . . National Starch and Chemical Corp. has purchased American Parboard Corp., Black Mountain, N. C. American Parboard will operate as a subsidiary of National Starch, also a particle board producer.

More INDUSTRY NEWS on Page 16

MORE AND MORE DEMANDS FOR

MEIKI HOTPRESSES

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Particle Boards
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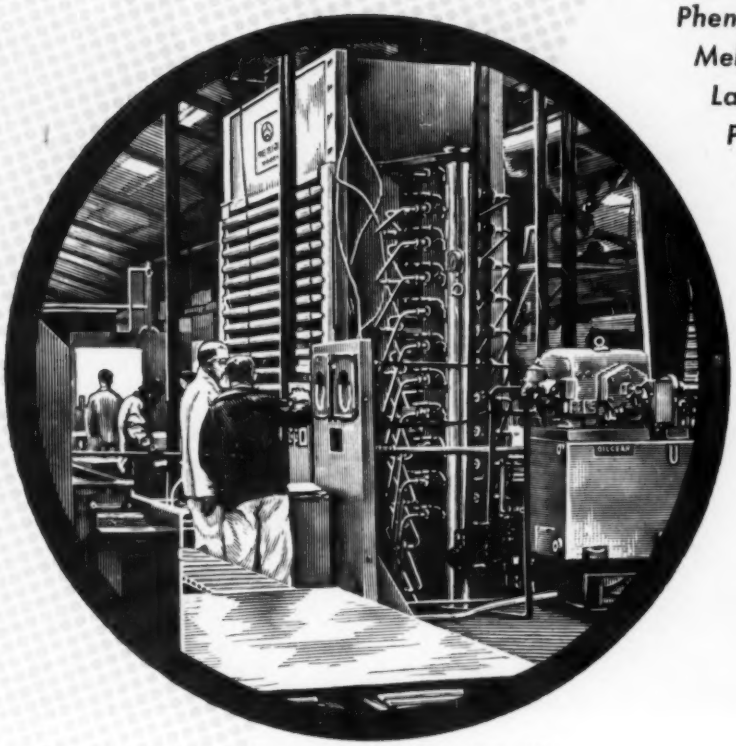
Plywood



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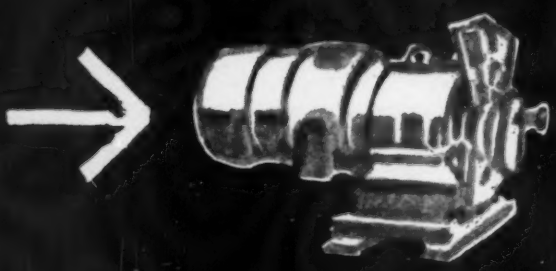
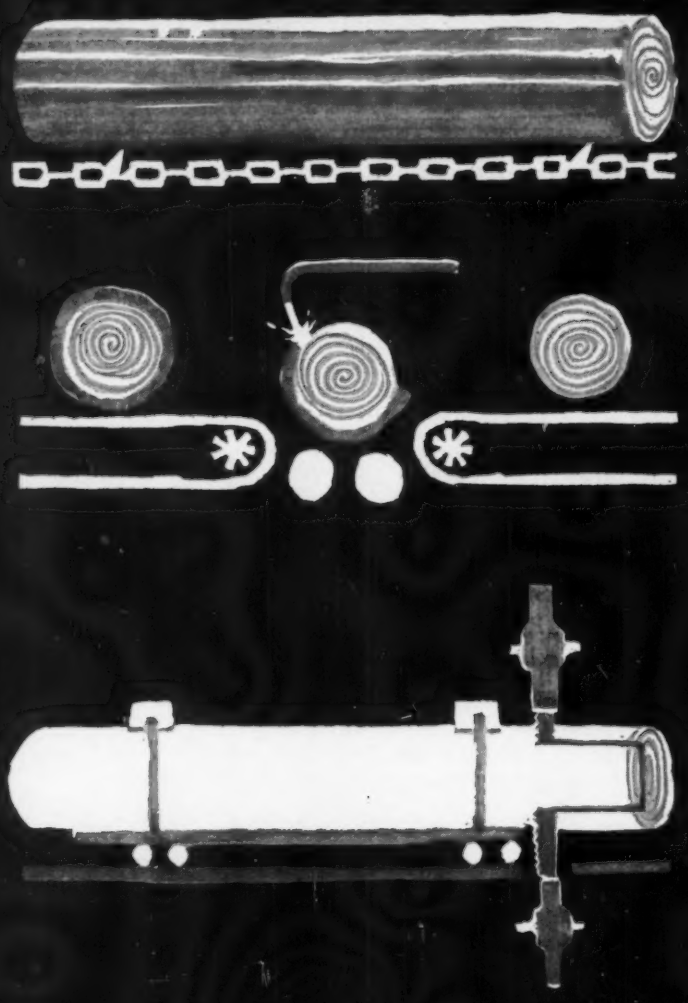
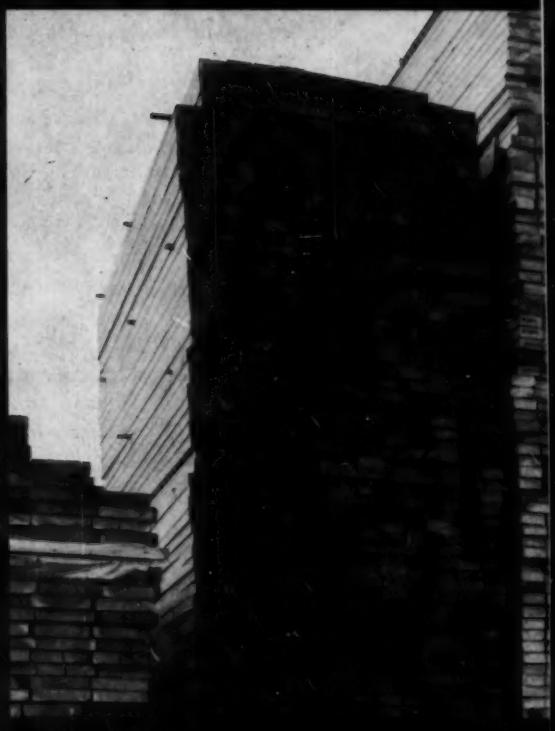
Close-up of typical Westinghouse control center for the lumber industry. This installation has control units which perform 42 electrical functions.



Westinghouse can help you **POWER-UP FOR**

Working in partnership with the lumber industry, Westinghouse has pioneered electrical equipment for consistent reduction of materials handling costs. Recent Westinghouse developments for the lumber industry include: static control, Cypak®, for se-





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quencing materials handling; Motocylinder for log and lumber handling; DynAC®, controllers for electrical braking of a-c motors; and the first log carriage drive using static regulators.

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J-96135

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Personalities . . .

MAHOGANY MANUFACTURERS ELECT . . . George T. Kinley, president and general manager of William L. Marshall, Ltd., veneer and lumber merchants in New York City, is new president of the Mahogany Association, succeeding John H. Miner, The Mengel Co., Louisville, Ky. Also elected at the annual meeting in Greensboro, N. C., were Charles W. Robinson, Robinson Lumber Co., New Orleans, La., vice-president, and James K. Henderson, Freiberg Mahogany Co., New Orleans, La., treasurer. It was reported at the meeting that a survey of furniture displays shows a strong trend to the use of mahogany.

HARDBOARD MEN NAME HUGHES . . . F. M. Hughes, general manager of Forest Fiber Products Co., Forest Grove, Ore., was elected president of the Hardboard Association at its annual meeting in Chicago. He succeeds R. D. Pauley, Weyerhaeuser Co., Tacoma, Wash. Walter C. Walling, manager of hardboard sales for Georgia-Pacific Corp., will serve as vice-president. Donald C. Linville continues as executive secretary.

SOUTHWEST MANUFACTURERS ELECT . . . Robert T. Jenkins, Nagel Lumber & Timber Co., Winslow, Ariz., has been elected president of the Southwest Pine Association, succeeding Milton Whiting, Kaibab Lumber Co., Flagstaff. Also named at the annual meeting in Albuquerque, N. M., were P. C. Gaffney, Southwest Lumber Mills, Inc., Phoenix, Ariz., vice-president and James J. Cox, Phoenix, re-named executive secretary.

AWI PICKS HOE . . . Robert Hoe, Jr., Hoe Corp., Poughkeepsie, N. Y., was elected president of the American Woodwork Institute at its annual meeting in Chicago. The business outlook, reported at the meeting, is that 1960 dollar volume will hold about even with 1959. Profits are uncertain. A swing back to wood windows was reported.

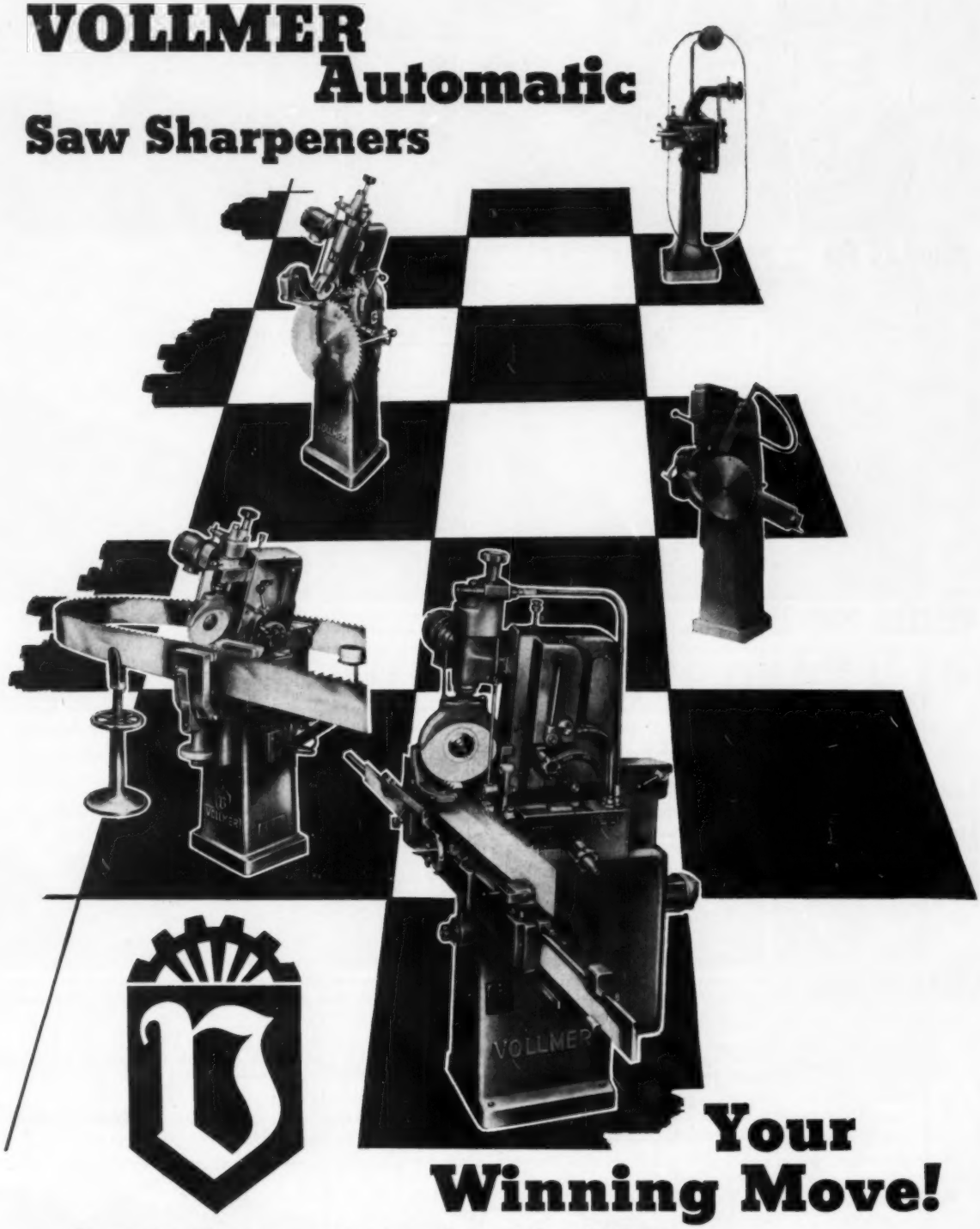
INSULATION BOARD INSTITUTE ELECTS . . . J. V. Jones, Armstrong Cork Co., has been elected president of the Insulation Board Institute. Other officers named at the annual meeting in Chicago are J. W. Brown, National Gypsum Co., Buffalo, N. Y., vice-president and J. K. Bolton, United States Gypsum Co., Chicago, treasurer. Charles M. Gray continues as manager of the institute.

BURNETT MOVES UP AT JOHNS-MANVILLE . . . C. B. Burnett has been elected president and chief operating officer of Johns-Manville Corp. A. R. Fisher, who has been president since 1951, continues as chairman and chief executive officer. Burnett was executive vice-president, a post which will be abolished.

NEW TRADE PROMOTION DIRECTOR . . . Western Pine Association has appointed Leo W. Beckstrom manager of its trade promotion department. He replaces the late Joseph W. Sherar who headed the department for 12 years. Beckstrom has served the past 11 years as Washington, D. C. representative of the association.

RED CEDAR MEN ELECT . . . Frank D. Roberts has been named acting secretary-manager of the Western Red Cedar Lumber Association. He temporarily replaces Arthur I. Ellsworth who has resigned.

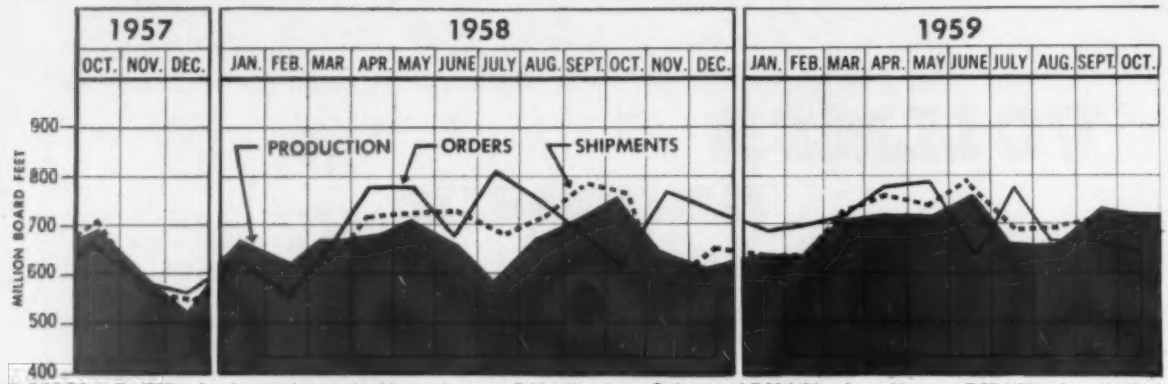
VOLLMER Automatic Saw Sharpeners



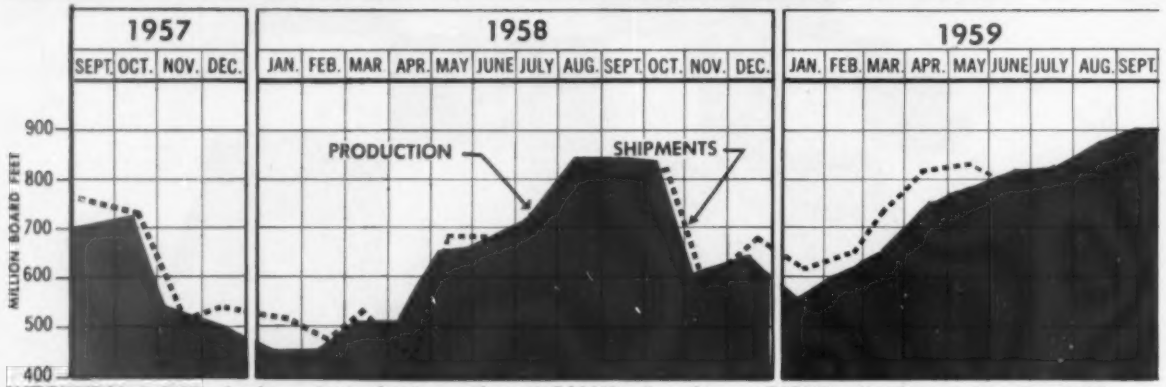
Your Winning Move!

For complete information — write, wire or phone one of our distributors:

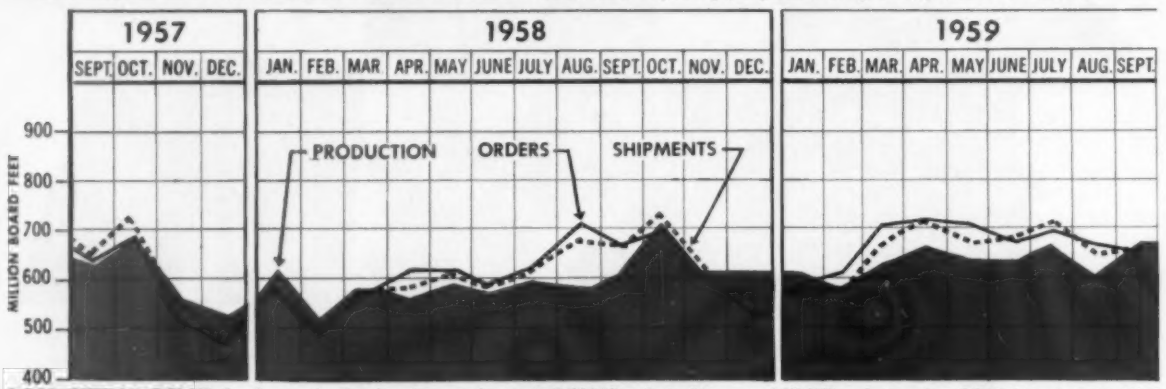
Colonial Saw Company, 679 E. Genesee Street, Buffalo 11, N. Y., Tel. MAdison 9248.
Corley Manufacturing Company, P. O. Box 471, Chattanooga 1, Tenn., Tel. MA 2-1161.
Joseph Roediger & Co., Ltd., 22 Martin Road, Hamilton, Ont., Canada, Tel. LI 5-6977 & LI 9-9147.
Max Sturm, Industrial Saws & Supplies, 1213 S. Hawthorne Blvd., Hawthorne, Calif. Tel. OSborne 5-3010.



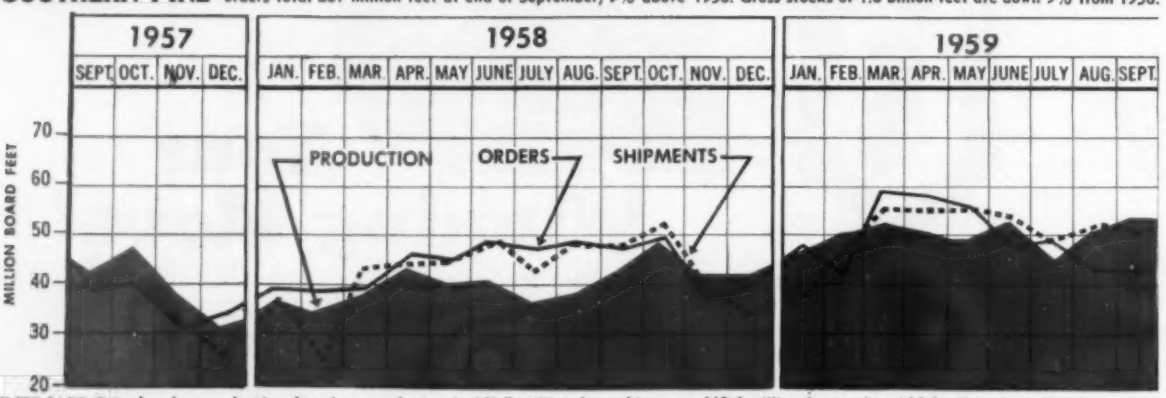
DOUGLAS FIR Lumber production for 10 months totals 7.05 billion feet. Orders total 7.02 billion feet, shipments 7.07 billion feet. Unfilled orders at the end of October total 554 million feet. Inventory at the end of October is 861 million feet.



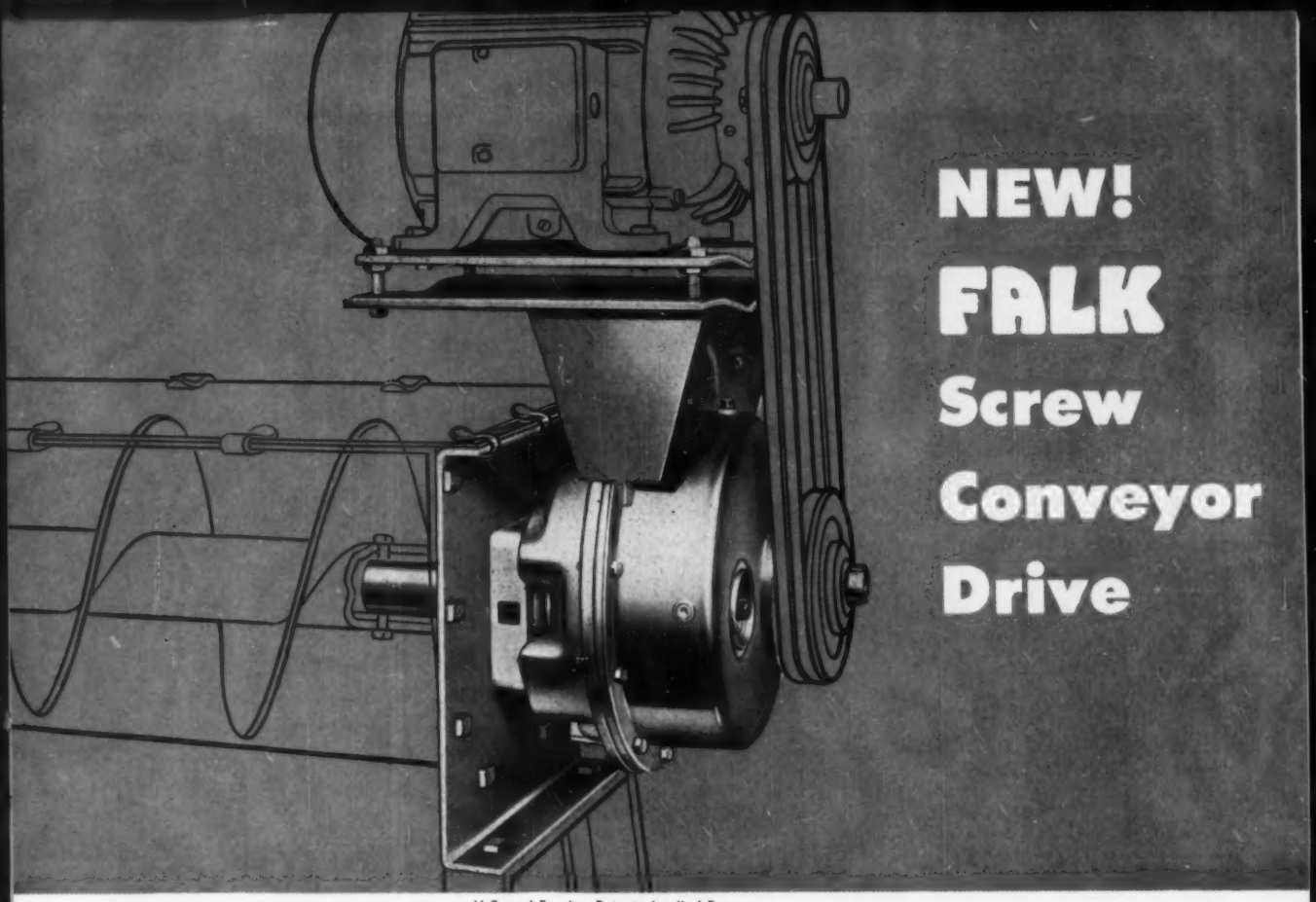
WESTERN PINE Lumber production for nine months totals 7.06 billion feet, shipments 7.15 billion feet. Gross stocks at the end of September total 1.92 billion feet. Production is 13.8% above a year ago; shipments are up 13.8%; stocks are down 1%.



SOUTHERN PINE Lumber production for nine months totals 5.66 billion feet, shipments 5.87 billion feet, orders 5.95 billion feet. Unfilled orders total 267 million feet at end of September, 9% above 1958. Gross stocks of 1.6 billion feet are down 9% from 1958.



REDWOOD Lumber production for nine months totals 461.5 million feet, shipments 448.6 million feet, orders 446.6 million feet. Stocks on hand at the end of September total 362 million feet compared to 361.7 million feet in 1958.



NEW! FALK Screw Conveyor Drive

U.S. and Foreign Patents Applied For

—the drive our customers asked for

Our customers helped us design this new unit. We sent our men into the field to find out what our customers needed in a screw conveyor drive—then our engineers designed a new drive that offers the maximum of service, versatility, operating economy and long life. Here are some of its outstanding features:

A COMPLETE DRIVE: Saves engineering and assembly time. Six sizes to cover entire range—each with these ratios: — 4:1, 9:1, 14:1 and 24:1. Bolts to any standard trough end—eliminates trough end bearing. Eliminates drive shaft wobble. Efficient FALK single helical gears.

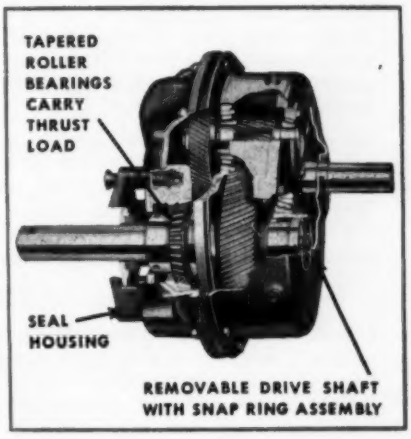
SEAL HOUSINGS: Choice of seals (neoprene or leather lip, felt or waste) to accommodate material conveyed. Space between trough seal and unit seal prevents conveyed material from reaching unit seal.

REMOVABLE DRIVE SHAFT: Snap ring assembly permits easy removal. Five sizes, from 1½" to 3⅞".

TROUGH END: Can be fastened to any standard trough. Eight sizes, from 6" to 20".

ALL-STEEL MOTOR MOUNT: Saves costly engineering and installation time and costs; no motor plates to design or fabricate. Motor can be mounted in virtually any position. Pre-drilled to accommodate NEMA standard motors ½ to 30 HP.

AN IMPORTANT ECONOMY: Buy only what you need—the basic reducer alone, or with trough end and/or motor mount. For detailed information, contact your Falk Representative or Distributor—or ***write direct for Bulletin 7106.***



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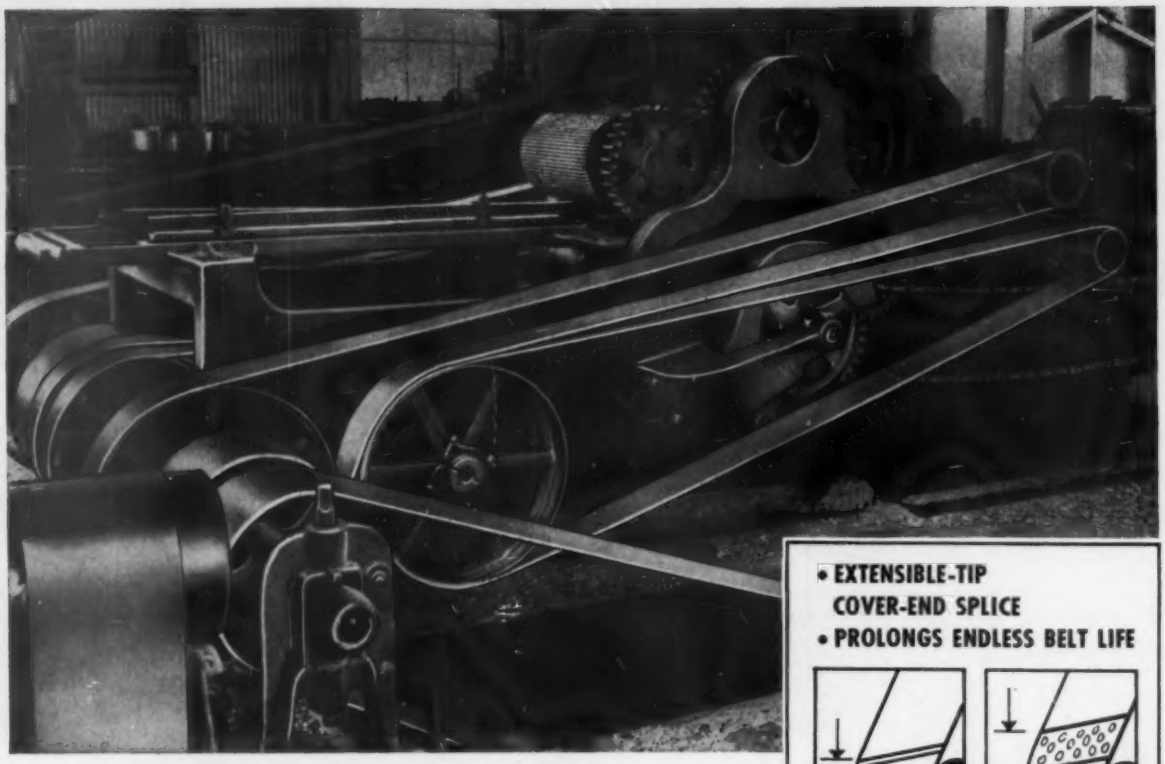


CONDOR ENDLESS BELTS
For High Speeds, Heavy Loads... at High Tensions

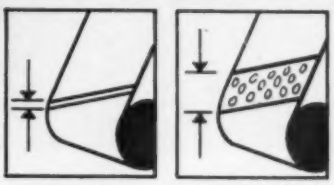
All-purpose Condor Whipcord Endless Belts offer exceptional advantages for hard-wearing installations. They provide steady, unfailing power delivery with high overload capacity. Condor Whipcord Belts feature an endless-wound, sealed-in cord construction which is destretched during manufacture. They won't shrink on the drive and are virtually unaffected by atmospheric changes. Extreme flexibility makes them ideal where serpentine drives supply power for several operations. Exclusive Extensible-Tip cover splice gives unfailing protection against cover separation . . . even at highest machine speeds and belt tensions! Write for Bulletin 6869.

On closed drives where belt fasteners are required, Condor Compensated Belt *holds* fasteners up to 4 times longer than ordinary belts. An exclusive process *equalizes* ply stresses when rounding pulleys. *Every* ply is under uniform tension . . . *every* ply pulls its full share of the load. There's no ply rupture or separation—especially at the fasteners! Write for Bulletin 6808.

SELECTION OF DRIVING SURFACES

Condor Whipcord Endless Belts and Condor Compensated Belt are available in a selection of driving surfaces to meet every tension requirement. Let an R/M representative help you select the belt engineered to give "More Use per Dollar" at your mill.

• EXTENSIBLE-TIP COVER-END SPLICE
• PROLONGS ENDLESS BELT LIFE



ORDINARY ENDLESS BELT — CONDOR WHIPCORD ENDLESS BELT

Note how Extensible-Tip splice at right *extends* stress over a wide area with a series of special rubber rivets.

1. **Splice area is "elasticized" to prevent cover separation under tension.**
2. **Stress is dissipated when rounding pulleys to assure trouble-free service with small pulleys, reverse bends, short centers.**

MANHATTAN EXTENSIBLE-TIP EXCLUSIVE WITH CONDOR ENDLESS BELTS

The exclusive Extensible-Tip is a means of "elasticizing" and "rubber-riveting" the cover-end of Condor Endless Belt so it cannot separate under aggravated tension while rounding pulleys.

With Extensible-Tip, *low* stress is extended over a wide area . . . *not concentrated on a line* as in ordinary belts. This construction makes Condor Whipcord Endless Belt ideal for hard wearing installations with small pulleys, small take-up running at high speeds and at high tensions.

Only Condor Whipcord Endless Belts feature Extensible-Tip . . . job-proven to outlast as many as 10 ordinary endless belts!

"More Use per Dollar"

RM 8218

BELTS • HOSE • ROLL COVERINGS • TANK LININGS • INDUSTRIAL RUBBER SPECIALTIES

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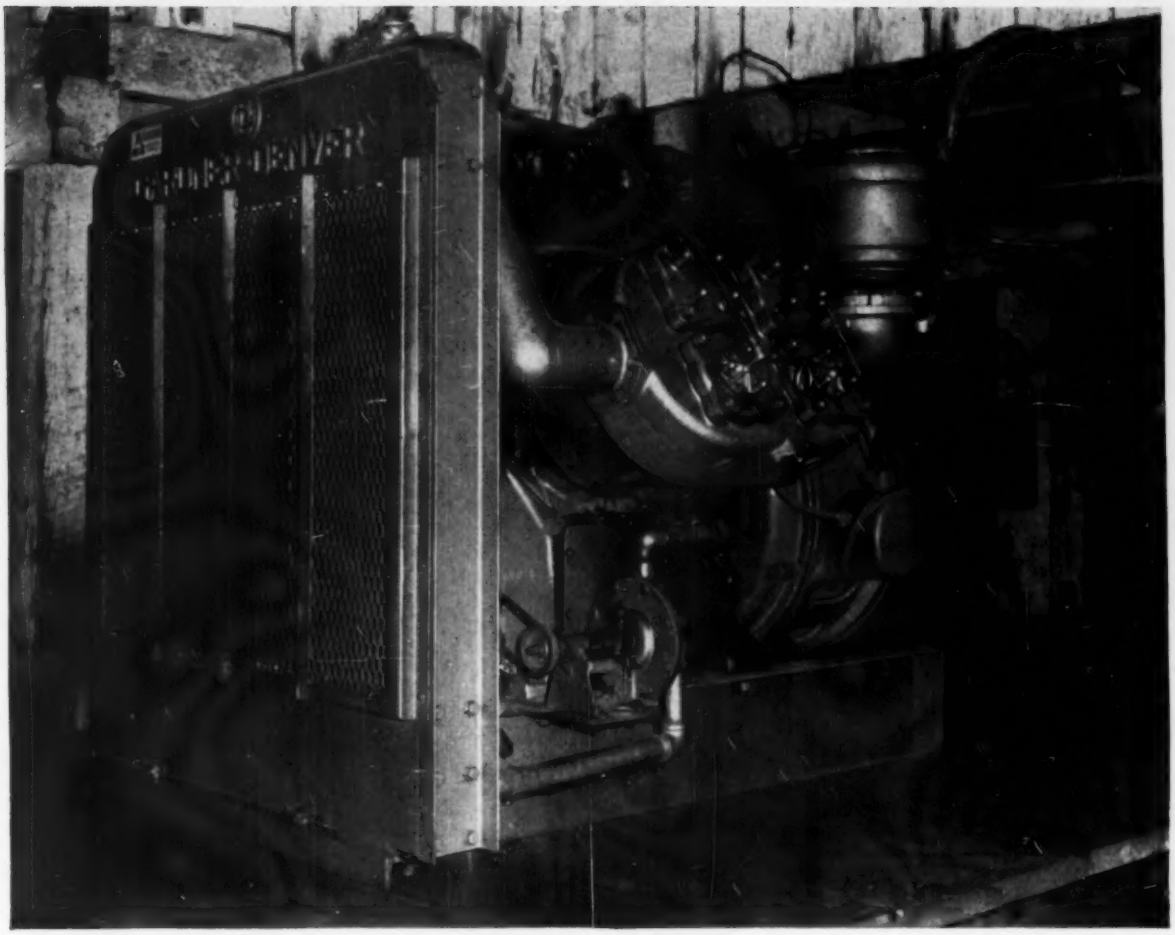
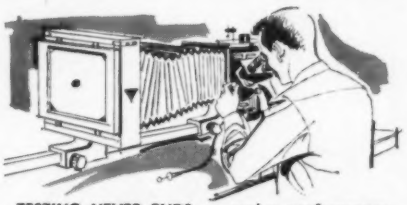


When you modernize with air power, start with this cost-cutter



TESTING NEVER ENDS—superior performance in a product is never an accident. Gardner-Denver men put equipment through its paces, and continually look to improve efficiency and quality. At Gardner-Denver, there's no substitute for men—our 100-year philosophy of growth.

Simply spot this compact, highly efficient WB compressor in a corner of your mill. Bolt it to the floor timbers and it's installed—quickly and inexpensively. Then hook it up and forget it. Years without a major repair is not unusual for this Gardner-Denver machine. Self-contained radiator-intercooler solves all water-cooling problems, too.

Now you've got versatile, economical power that's convenient, easily controlled and—above all—*fire*-safe. There are eight space-saving WB sizes from 142 to 1150 cfm piston displacement. Ask your Gardner-Denver representative.

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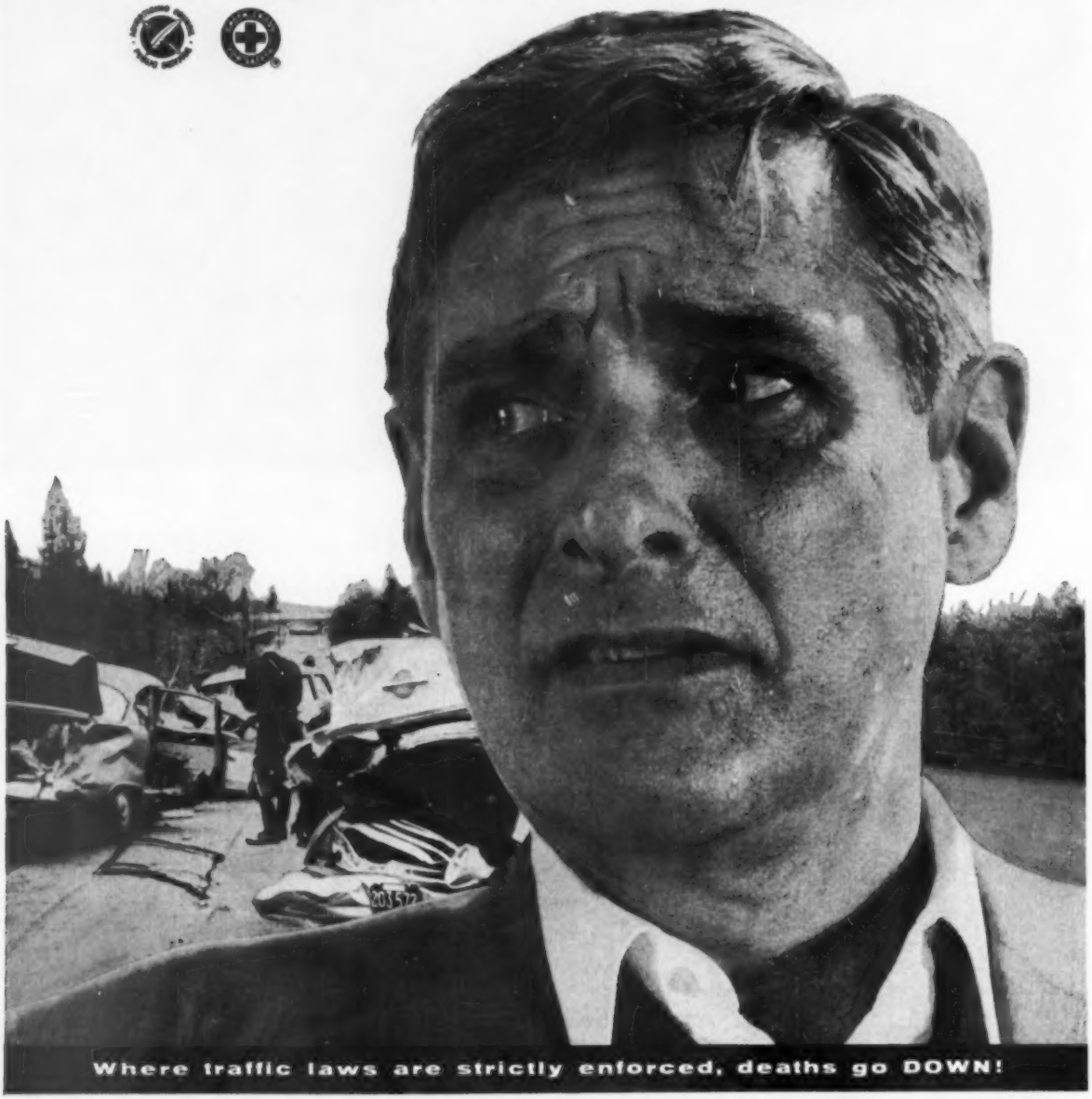
"I wish I could have done something to help . . ."

You can do something about traffic accidents! Drive safely yourself—obey the law. Sure. But you can do a lot *more!* Traffic accidents affect *everybody.* Reducing them is a community problem. Its solution calls for systematic, organized effort and cooperation with public officials—for teamwork and leadership. Here is where *you* can help. Join with others who are working actively to promote safe driving and secure strict enforcement of all traffic laws. Make your influence count. *Support your local Safety Council!*



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Space for this message was contributed by THE LUMBERMAN as a public service

Industry Meetings

DECEMBER

Red Cedar Shingle Bureau, December 4, Olympic Hotel, Seattle, Wash.

Washington Forestry Conference, December 4, Chamber of Commerce, Seattle, Wash.

National Oak Flooring Manufacturers Association, annual membership meeting, December 9-10, Hotel Peabody, Memphis, Tenn.

Western Forestry & Conservation Association, December 9-11, Spokane, Wash.

1960

JANUARY

Southern Pulpwood Conservation Association, January 12-13, Dinkler-Plaza Hotel, Atlanta, Ga.

Truck Loggers Association, January 13-15, Hotel Vancouver, Vancouver, B. C.

Appalachian Hardwood Manufacturers, Inc., January 13-15, Netherland Hotel, Cincinnati, Ohio.

Forest Fire Protection Committee, Canadian Forestry Association, January 18-22, Pacific National Exposition Grounds, Vancouver, B. C.

FEBRUARY

National Wooden Pallet Manufacturers, February 7-9, Hollywood Beach Hotel, Hollywood, Fla.

Forest Management Control Conference, February 15-17, Purdue University Memorial Center, West Lafayette, Ind.

Industrial Safety Conference (California), February 16-17, Fairmont Hotel, San Francisco, Calif.

Fernhoppers Day, February 20, Oregon State College, school of forestry, Corvallis, Ore.

Northern Hemlock & Hardwood Manufacturers Association, February 23-24, Northland Hotel, Green Bay, Wis.

National Association of Commission Lumber Salesmen, February 25-27, Peabody Hotel, Memphis, Tenn.

Oregon Logging Conference, February 25-27, Eugene, Ore.

MARCH

Hardwood Dimension Manufacturers Association, March 2-4, St. Charles Hotel, New Orleans, La.

Southern Forestry Conference (Forest Farmers Association), March 10-11, Robert Meyer Hotel, Jacksonville, Fla.

Redwood Region Logging Conference, March 17-18, Eureka, Calif.

Third Annual Cooperative Kiln-Drying Short Course, March 21-25, University of Illinois, Urbana, Ill.

West Coast Lumbermen's Association, annual meeting, March 24-25, Portland, Ore.

Intermountain Logging Conference, March 28-30, Spokane, Wash.

APRIL

Southern Pine Association, annual meeting, April 4-6, New Orleans, La.

National-American Wholesale Lumbermen's Association, April 21-23, The Greenbrier, White Sulphur Springs, W. Va.

Northeastern Lumber Manufacturers Association, April 25-26, Syracuse Hotel, Syracuse, N. Y.

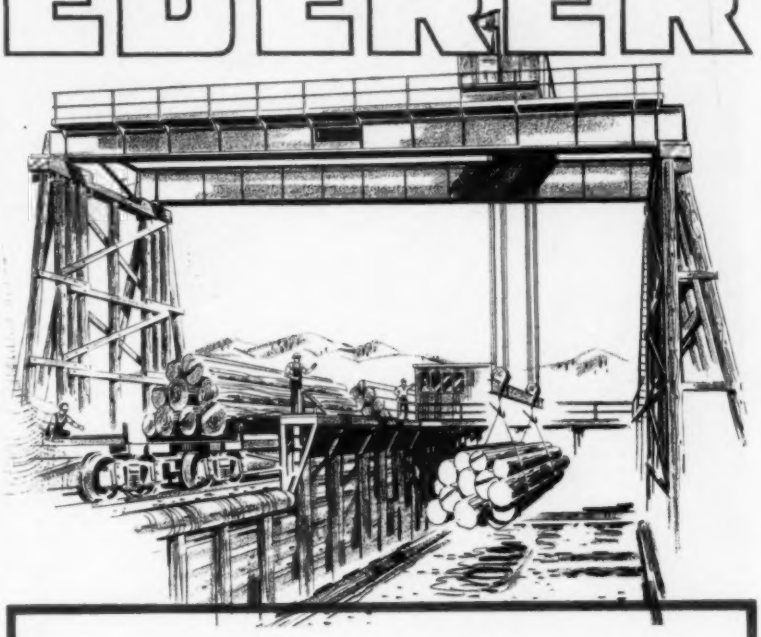
JUNE

Forest Products Research Society, annual meeting, June 5-9, Montreal, Quebec, Canada.

AUGUST

Ponderosa Pine Woodwork, August 2-4, Fairmont Hotel, San Francisco.

EDERER



Lift the load—and lower away—all in one smooth, fast operation

Time and cost are materially cut in handling logs with this EDERER crane—and there's no damage to logs. The crane is "job-engineered" to lift a car or truckload at a time from a fixed unloading position on the track—and lower it into a waterway for rafting and delivery to mills.

The bridge is fixed over the unloading position; the hoist moves from track over to waterway. Hoist is completely housed and control station is under shelter—permitting uninterrupted work in all kinds of weather.

This crane is typical of EDERER "job-engineering" for the forest products industries—designing and building special cranes and heavy equipment for many special job requirements. An EDERER engineer will be glad to discuss YOUR job requirements.

EDERER "job-engineering" helps expand production in an expanding industry.

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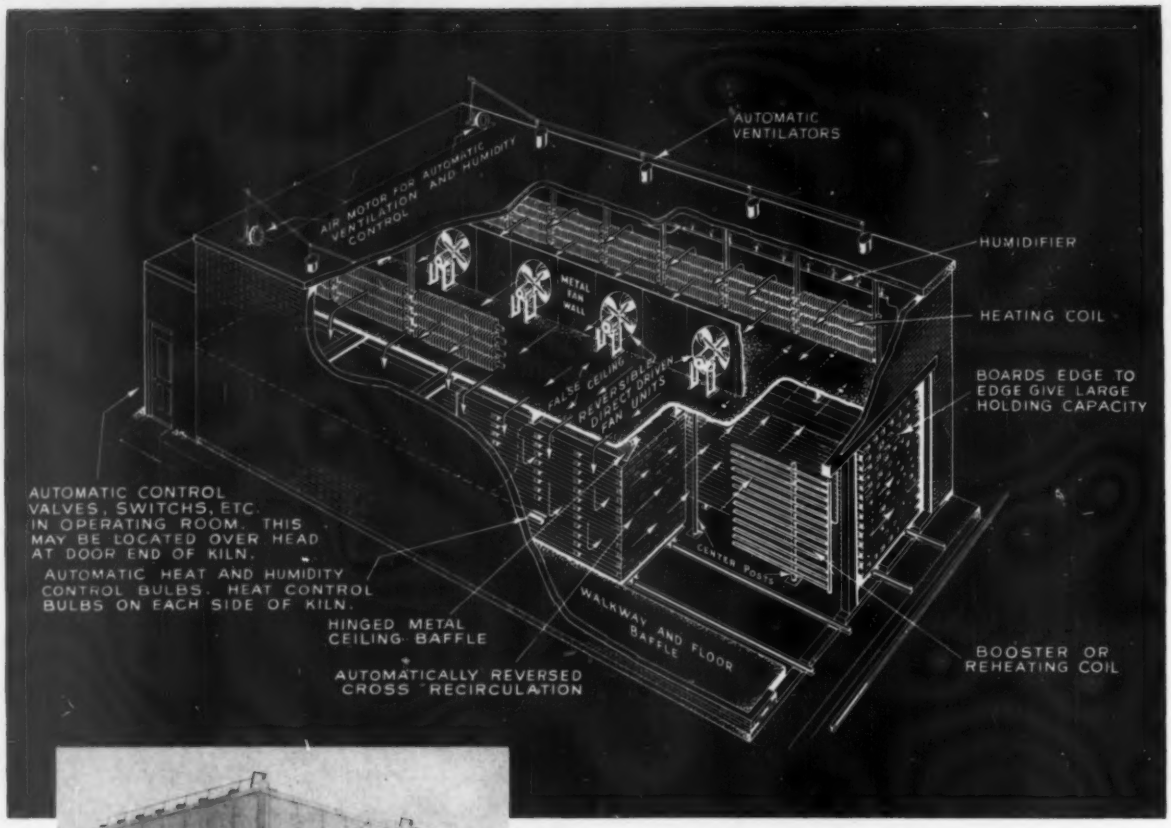
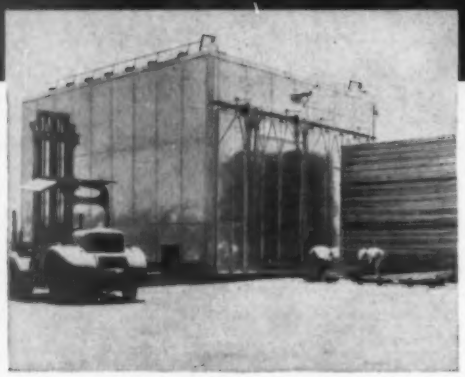
EDERER
CRANES

SINCE 1901 "JOB-ENGINEERING" CRANES AND HEAVY EQUIPMENT


AUTOMATIC VENTILATORS
AIR MOTOR FOR AUTOMATIC VENTILATION AND HUMIDITY CONTROL
HUMIDIFIER
METAL FAN WALL
HEATING COIL
FALSE CEILING
REVERSIBLE DIRECT DRIVEN FAN UNITS
BOARDS EDGE TO EDGE GIVE LARGE HOLDING CAPACITY
AUTOMATIC CONTROL VALVES, SWITCHS, ETC. IN OPERATING ROOM. THIS MAY BE LOCATED OVER HEAD AT DOOR END OF KILN.
AUTOMATIC HEAT AND HUMIDITY CONTROL BULBS. HEAT CONTROL BULBS ON EACH SIDE OF KILN.
HINGED METAL CEILING BAFFLE
AUTOMATICALLY REVERSED CROSS RECIRCULATION
CENTER POSTS
WALKWAY AND FLOOR BAFFLE
BOOSTER OR REHEATING COIL



Before you O.K. any plans for dry kilns...get the STANDARD story

• Get the Standard story now—because it may pay your company dividends for years and years to come. See how Standard's 72 years of specialization assures you the highest quality engineering and manufacturing. Ask owners about Standard's reputation for integrity . . . how Standard solidly backs the quality and workmanship of every Standard Dry Kiln. Have your secretary write or tear out this advertisement and mail it today with your name, company and address for the complete Standard story.

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STANDARD DRY KILNS

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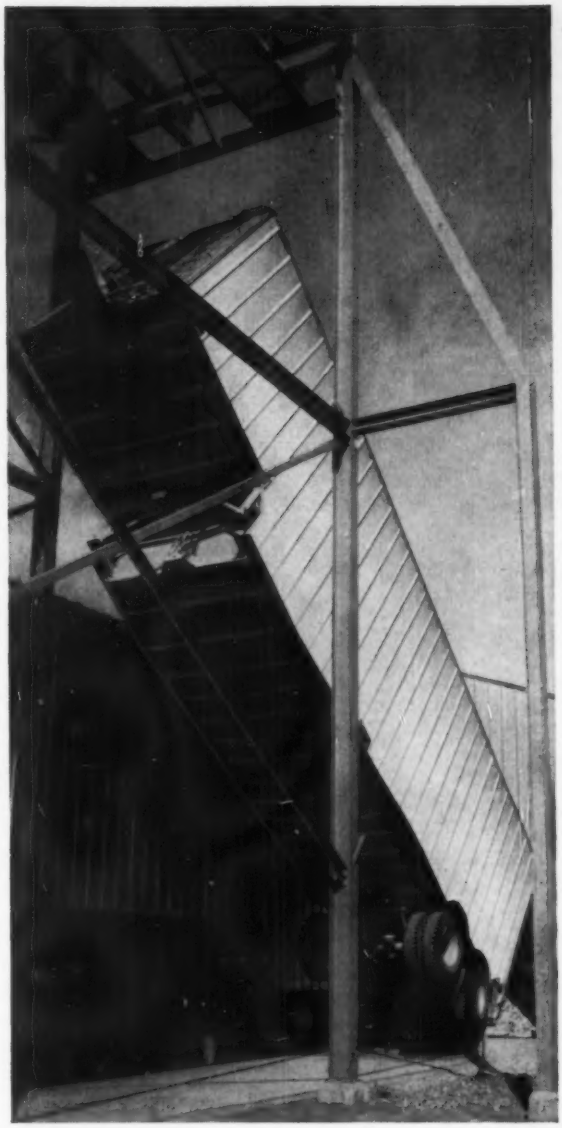
In Arizona and New Mexico, contact Patterson Sales Company, 618 E. Yandell St., El Paso, Texas



Brawny Fruehaufs Go Everywhere!

There's an old lumberjack saying—"sky, wide and crooked". It means "everywhere" and it fits rugged Fruehauf Trailers like it was coined for them. Whether you are toting wood chips, hauling Ponderosa or Douglas out of the back country, or trucking finished lumber, there's an economical Fruehauf ready to handle your job at less cost-per-mile.

There is a wide choice of models for both on-highway and off-highway hauling, plus logging truck equipment to fit your individual needs. So . . . whether you are at timber line or mill site, you can put a rugged Fruehauf to work for you with confidence.

And there's always a Fruehauf Branch close by, for instant service and replacement parts. Fruehauf facilities cut costly down time, boost your profits. The Fruehauf reputation, built over 45 years of serving you, is your best assurance of complete satisfaction.

• • •

Fruehauf rugged corrugated-steel wood chip units are available in lengths up to 40-feet. Mounted on tandem-axles these drop frame units have rear gate dumping for ease in handling chips.

Heavy-Duty and Over-The-Road Loggers

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Lightweight, Rugged Platform Trailers

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For Forty-Five Years—More Fruehauf Trailers On The Road Than Any Other Make!

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Serving the Industry Since 1852

FORTUNES from FLAKES!

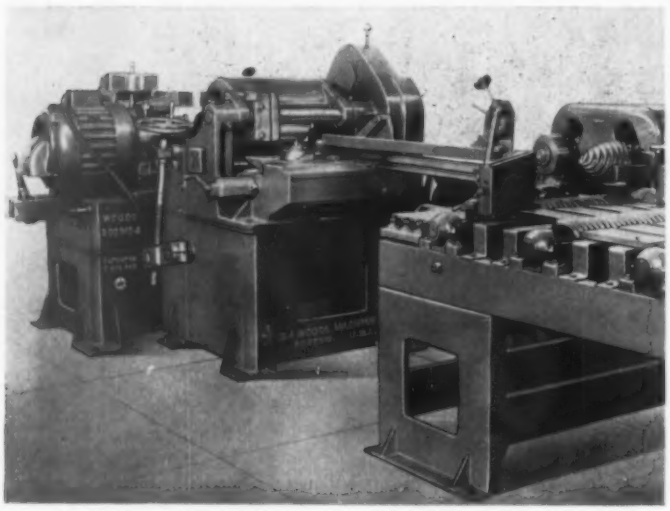
with a

WOODS 900 FLAKER-SURFACER

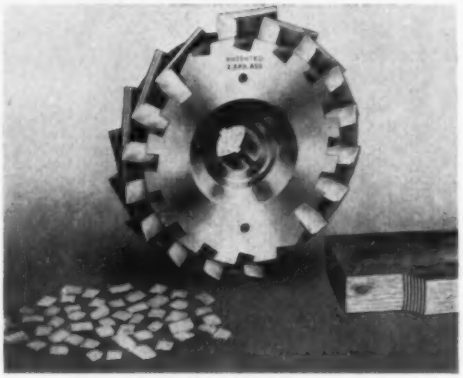
The Woods 900 MS Series Flaker-Surfacer introduces a new concept of wood working machinery to effect a more profitable utilization from stock being processed.

From the excess material of the rough lumber to be finished, this machine will produce wood flakes instead of sawdust and planer shavings. The size of the flakes can be varied to meet the demand.

These wood flakes contain the strength properties and desired fibre length of the wood to make them a very valuable raw material for the pulp, paper and composition board industries.



Woods 900 MS Series Flaker-Surfacer shown set up with automatic feed table and located ahead of planer and matcher or surfacer. Stock can be properly processed with this combination at speeds to 1000 linear feet per minute.



Flaker head is equipped with multiple radial knives arranged in a unique helical-spiral knife line. The knives cut parallel with, but in a special arc across the grain, removing the excess wood in uniform, longitudinally grain spiral end flakes, leaving a flat surface on the stock for final finish by the planer knives.

To get additional information about this money-making Flaker-Surfacer, cut out this coupon, attach it to your letterhead and mail it now.

S. A. WOODS MACHINE CO., DEPT. L
27 Damrell St., Boston 27, Mass.

Kindly send descriptive literature on the Woods 900 Series Flaker-Surfacer to us.

Attention _____

S. A. WOODS MACHINE CO.
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BOSTON 27, MASS.

TYPICAL INSTALLATION of Boliden Mining Co. timber impregnation treatment facility.

Impregnation Treatment Increasing in Use

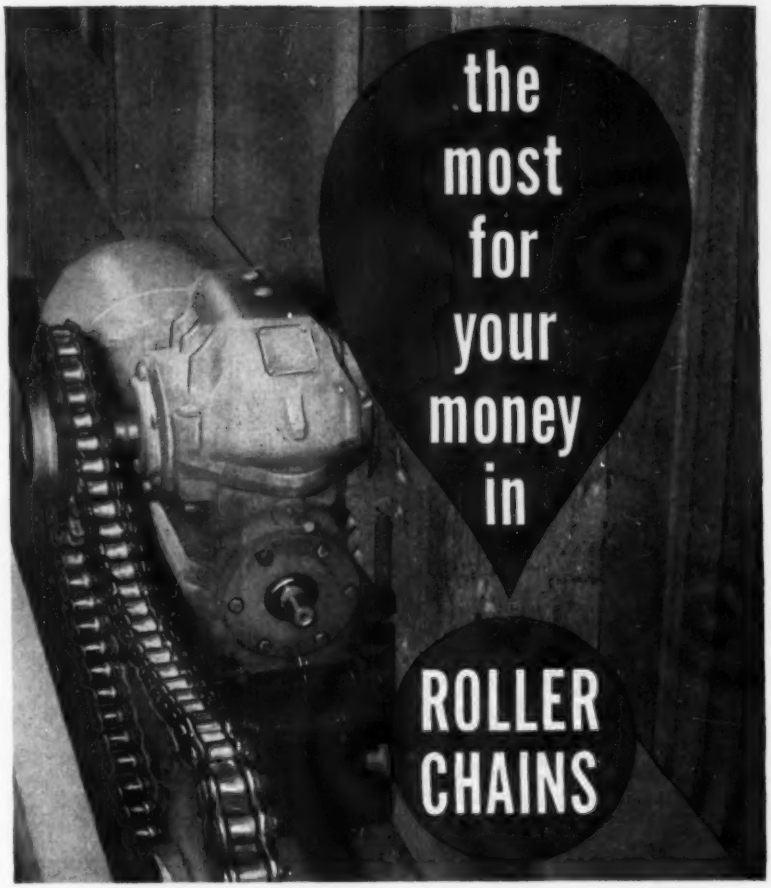
The interest in timber preservation methods is rapidly growing in many countries, not least in areas where previously rich timber resources are being depleted, according to Olle Hellstrom of the Swedish Boliden Mining Co.'s impregnation department, who has made a four months' round-the-world tour. During his trip he supervised the putting into operation of a number of Boliden impregnation plants, based on a principle of treating the timber with a preservative salt under vacuum pressure.

In Japan, Mr. Hellstrom visited the Japanese State Railways, which has received a test delivery of salt for experiments with impregnation of timber. In the Philippines, a Boliden plant, purchased by a Chinese dealer for supplying his clients with rot- and termite-proof timber, was opened during Mr. Hellstrom's stay. It is the second plant in that country, the first having been in operation in Manila for some time and being primarily used for impregnating plywood. Still another plant is under completion in the Philippines.

Australia, whose resources of resistant trees are becoming scarce, has shown great interest in the Boliden method. A plant is being built in the southern part of the continent, and plans for another in the tropical district in the north are being discussed.

Even more advanced in this respect is New Zealand, where ten Boliden plants are in operation or being completed. The authorities have ordered that all non-resistant timber used for building purposes must be impregnated, and this most likely applies to timber coming from the vast plantation of coniferous trees of foreign origin started by the New Zealand timber industry.

On his way back to Sweden, Mr. Hellstrom also visited three of the eight Boliden plants in the United States.



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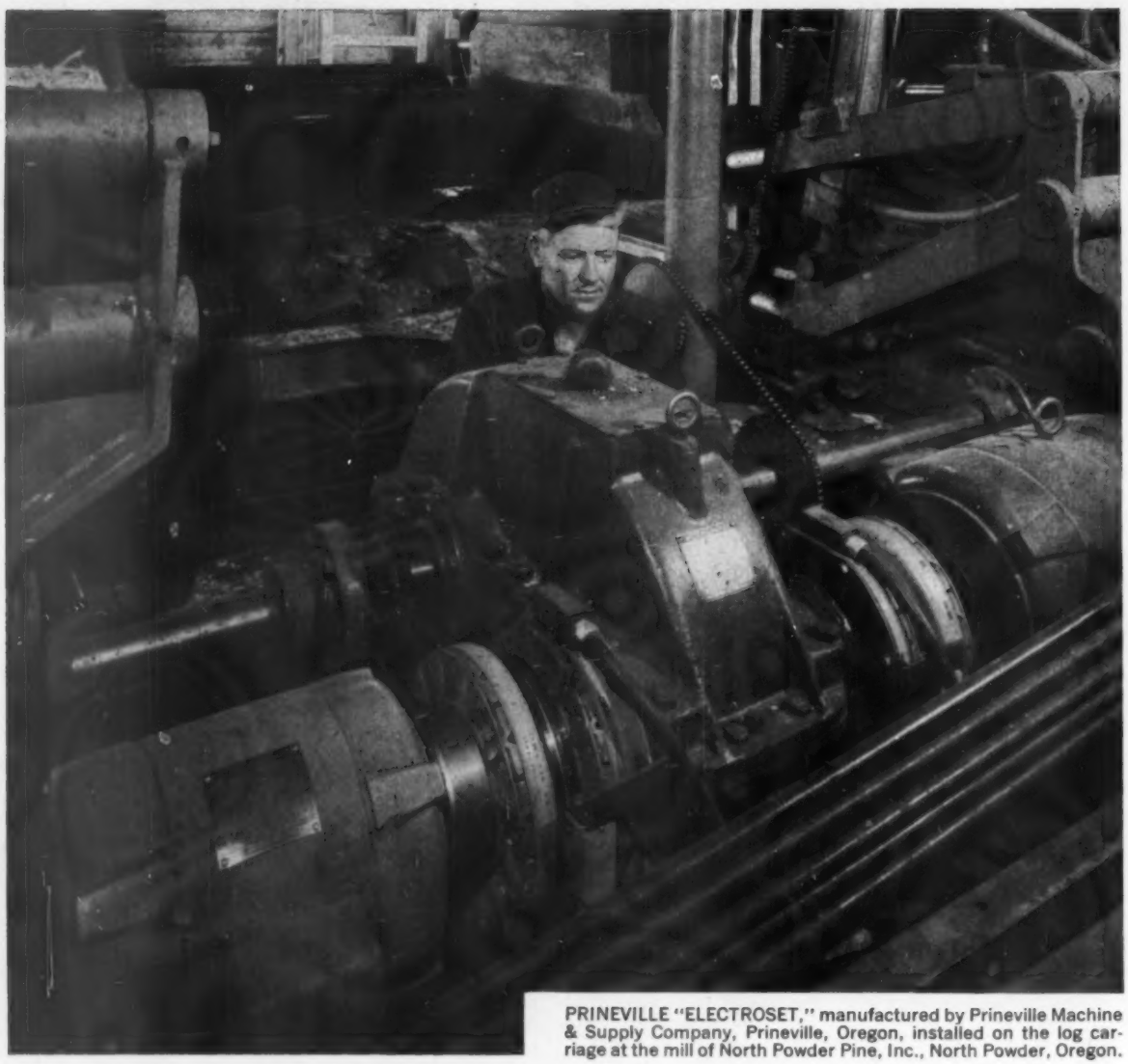

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EDITOR'S PAGE

Something to Think About

To be realistic, no industry readily changes its operating habits or its products overnight—nor will the lumber industry.

Lumber reached its wide application as a construction product due to its natural versatility and strength — its ease of working — ease of shaping — ease of adapting to design and form.

However, trees were the idea of no man. They are as men found them, a natural resource. They differ in species, size, strength, beauty and in the way they must be handled in preparation for use. No man, no region had anything to do with these factors. Here is the timber, whatever its characteristics may be. This same variety has added to its endless uses, has created more markets.

The lumber manufacturer has the job of converting the tree into usable form. Perhaps the wood he cuts may be improved upon. Certainly it behooves any manufacturer to be constantly on the alert for means of product improvement. As our society becomes more sophisticated most product manufacturers have found it necessary to change and improve their products or their markets disappear.

What the customer wants is pretty much what he'll finally get. As his selection of materials grows, he will decide. If the product is not to his satisfaction—if it fails to keep pace with his changing ideas and wants—that's all. Miss on this one and you are out!

There is a way for reasonable men to work out controversial problems—even among those in the various lumber producing areas of this nation. The way is through facts—facts about markets and facts about products. This may sound like oversimplification, but the facts will prevail with time, whether or not they are recognized. The trends are usually apparent with studied observation.

The concluding SEASONING FORUM article in this issue will not solve the seasoning problem. It may help stimulate some thinking on the subject. We hope you'll read it objectively. Whatever you read into it, considered must be the fact that we are entering an era of accelerated growth and development that has never before existed in our history. That it will affect construction methods and products is already apparent.

12 Ways to

By DEAN SHERMAN
Editor, THE LUMBERMAN

When THE LUMBERMAN offered its pages to constructive comments on the long standing controversial seasoning question, we assured you we would provide a conclusion that might contribute to the solution of the controversy.

Here is the article. It will not in itself solve the problem. We hope it may stimulate some realistic thinking. The thinking of many very substantial people in the industry has gone into it. To this, we hope that you will add your own.

We extend grateful acknowledgment to L. A. Nelson, whose article (The Lumberman, March, 1959) started this series on seasoning, and to the many lumbermen and seasoning experts for their long hours of assistance in preparation of this article.

Help Solve the Seasoning Controversy

1. Build experimental houses of all species, green and dry. Find out if lumber should be dried to 19% . . . 15% . . . 12% . . . or not at all.
2. Study markets continuously to learn what people want and expect.
3. Maintain strict quality control of the product in all steps of basic sawmill manufacture.
4. Protect lumber from atmospheric conditions from the time it leaves the mill until it finds its end use.
5. Strictly enforce controls of grade and trademarking of every piece of lumber.
6. Start quality control programs at the tree so that normal and abnormal woods may be segregated when used for framing purposes.
7. Control handling of the product through the retailer to the consumer.
8. Proper sawing . . . both methods and equipment used . . . will correct many of the characteristics of wood.
9. Keep ahead of the market. Determine the best possible product, then seek to educate the market to its use.
10. The trend is to component construction and glued-up engineered wood structures. These markets ask for 15% maximum moisture content and preferably under 14%. Controversy on whether to dry or not to dry may be of little importance as this trend continues.
11. So, let's shelve the seasoning controversy between all areas until more facts are at hand.
12. Then study all available points on which regional producers agree . . . and disagree, objectively resolve points of disagreement and set up a code of ethics.

The answer to the controversy on seasoned or kiln dried, 2-inch framing lumber for residential structures is not an easy one to resolve and cannot be finally conclusive. There are factors of quality, economics, market demands and product standards maintained by individual manufacturers and by regions. There are conditions that may apply to one species and not necessarily to another.

To bring together such a widespread industry in common agreement of seasoning, where there are so many species variations, is a slow and difficult process. This is true particularly when many believe it is not essential.

The acceleration of changing markets is in itself confusing. This same continuing change creates the necessity for a certain amount of fluidness of standards. The character of the raw material supply and the market demands are, however, the real determining factors of the shape and quality of wood products.

The moisture content of framing lumber is not something that building codes nor specifications may alone determine. It goes much deeper: It involves the behavior of woods in use—the type of wood available—the practice of individual manufacturers—the customer's needs.

There is a great deal known about wood behavior in relation to moisture content, but much more research needs to be done to fully understand its behavior under conditions of use and exposures to climatic conditions in handling and construction.

We can start with these premises:

• Lumber manufacturers are not opposed to furnishing dry framing lumber. The general opinion among those who do or do not dry 2-inch framing lumber is that dry lumber qualities are often preferable. Dry lumber is, and has been, available in both the South and West for many years. West Coast Lumbermen's Association specifications for seasoned boards and dimension call for an average of 19% or less but nothing over 25%. Southern Pine Inspection Bureau specifications for all framing items are for 19%, but if marked as "kiln dried," maximum is 15% maximum moisture content. Western Pine Association specifications, on request, provide for 85% of an item to be 19% or less. All will furnish lumber of specified moisture content.

(Continued on next page)

12 Ways to Help Solve the Seasoning Controversy *(Continued)*

• In both the South and West there are producers who oppose the premise that all 2-inch framing lumber for housing should be dried—or that it should be dried to 19% maximum moisture content.

• Most lumber manufacturers dry all upper grades, finish, siding and paneling in both West and South, or sell it to processors who do their own drying. These items are not in question here.

• Many believe that the benefits of dry framing lumber are less important than the extra cost and results obtained.

• Architects and builders have a pronounced influence on the type of wood products used in construction. A great deal rests on the demand of these and other specifiers. FHA exercises far-reaching controls on wood products through the most definite Minimum Property Standards.

• If market demands were for *only* seasoned framing lumber, all manufacturers would dry it. This is a factor governed not necessarily by codes or legislation, but by economics and free enterprise.

The current controversy revolves around two points: Whether or not (1) all species of 2-inch framing lumber should be seasoned, and (2) whether such lumber should be dried to a 19% maximum or average moisture content.

Advocates of seasoned 2-inch framing lumber maintain that it must turn out products that will give best performance in end-use. What was good enough in the past is no longer good enough today. With the growing intensity of competition of other products, lumber must continually improve its standards of moisture content limitations and product quality if it is to continue to be a major factor in construction. The problem of properly dried lumber exists as much in the South as in the West.

Others contend that unseasoned framing lumber is a good, serviceable product and that seasoning costs when drying to a maximum of 19% are not justified for Douglas fir—that unseasoned lumber will provide a good house.

Many claim that competitive advantages are the only reasons Southern operators want all 2-inch framing lumber seasoned 19% maximum moisture content for all species. These advantages are said to be because of lower rail rates for the Southern operators due to closer proximity to southern and eastern markets and the additional costs of kiln drying that would be added to western lumber. Southern operators deny this.

The real principle involved is whether or not seasoning is necessary to produce a product that will give the best "in-place" performance. If it is, then to what moisture content percentage should it be dried—no matter what the species or where they come from. Are the costs justified?

We are not concerned here with whether or not there are competitive advantages in shipping. Presumably, if there are, this question must be met realistically and settled among reasonable men and the rail lines involved.

We are concerned with the product. Does it meet the requirements of today's competitive markets? Can it be made better? How many of the claims and counterclaims are opinions only? How many are based on facts? How exhaustive has been the research of wood behavior "in-place" in all climatic regions of the nation? How much real effort is being made on market research upon which to base manufacturing methods and policies? Have we researched the problem thoroughly—to find out—to know the real facts?

To reach a workable basis for understanding of the problem we will have to briefly re-examine the areas concerned.

Early in the 20th century, the South reached its pinnacle as the supplier of framing lumber. Shortly, thereafter, Douglas fir moved up to become the primary source of framing lumber for the nation. Douglas fir shipments were largely by water, where volume rather than weight determined shipping costs. The construction grades from old growth timber were primarily heartwood which had very little risk of stain or decay and had a comparatively low moisture content.

When rail shipments became a factor, kilns were introduced to reduce weights since the Pacific Northwest did not have year-round climatic conditions favorable for air drying. It was not until high humidity kilns with forced-air circulation were introduced in the West that dimension lumber from old growth could be successfully kiln dried without a heavy machining degrade loss.

Southern operators had gone far to educate many midwest and southern markets to use dry lumber before western lumber moved into these areas.

Eastern seaboard and the Western markets were the primary green markets and remain so today. The midwest, too, has become a large consumer of green lumber.

As the large old growth timber was harvested from the South, the young trees reached marketable size, but in much smaller average diameters. Because of the changing forests in the South to smaller diameter trees, drying became more necessary to produce lumber without stain. There are less clears while common grades increased and contained more of the higher moisture content sapwood.

Conversion from old growth forests to younger growth has been more recent in the West. Since World War II, an increasing volume of young growth Douglas fir from smaller diameter trees has been reaching the markets.

The characteristics of young timber of most species are in some respects comparable. Their greater percentage of sapwood leaves them more subject to stain and decay, until they are seasoned.

The younger timber, however, does not present the volume of encased knots typical of old growth and may generally be dried to lower moisture contents with less machining degrade. It has the advantage of less degrade in construction lumber, but the disadvantage of more sapwood and higher moisture content. This is true of both Douglas fir and Southern pines, and is in fact, typical of all species.

Southern operators were pressed into drying, more to free the young growth from stain and decay risks and to minimize shrinkage "in-place" rather than because of building code restrictions.

West Coast woods have been slower to reach the point where it has been essential to dry lumber in order to meet market demands. Thus the differences have grown as to whether or not it is necessary to dry framing lumber. A substantial percentage of lumber production from both the South and West still goes to market unseasoned or not properly seasoned.

While pressures to force the practice of seasoning all 2-inch framing lumber have flared up again and again during the past 30 years—the most recent during the working out of the joint industry promotion program—it would appear today that the situation may actually be a "self-curing" process.

As more young growth Douglas fir reaches markets, there is more need to properly season due to the increased amount of sapwood. Though the South is generally on a "so-called" pulp economy, there are many companies in that area that are growing timber up to 22% faster than

it is being used. Thus the cycle is beginning to repeat itself and eventually an important proportion of the South's timber may be expected to reach larger sizes than exists today. To the extent this condition continues and grows, the timber stands in the South will then approach a better age-balance stand.

While the pulp industry is growing rapidly in the West also, it is not likely that the timber in the West will be reduced to as small diameter sizes as is prevalent in the South today, if good forestry practices prevail.

Here are important points of wood behavior related to moisture, which are known. This information is compiled from established facts determined by research studies and available in detailed printed form.

• Moisture is present in wood in the tree as "Hygroscopic" (bound) water in the cell walls and as "free water" in the cavities within the cells. Moisture content present is the ratio of water to dry weight of wood. Species may vary in moisture content from 35% to more than 200% in the living tree.

• Wood of all species will dry to about 30% or less moisture content before shrinkage begins. This is the fiber saturation point at which free water is removed. The Hygroscopic water is still present. As lumber dries below 30%, shrinkage progress is in proportion to the amount of drying. Heartwood and sapwood shrink the same amount.

• Lumber dried below 20% moisture content, and kept dry, is no longer subject to stain and decay. The fungi will no longer grow at these low moisture contents. Dry lumber would have to absorb moisture over 20% before decay damage could again set it. This would be highly unlikely unless there is a serious construction fault.

• While some lumber that has a natural tendency to crook, and twist is detectable in green form, if it is dried to 20% the distortion is readily detectable. Much of the abnormal wood may be segregated before drying. More may be segregated at 20% moisture content.

• Wood in-place will dry until it reaches a moisture content in equilibrium with atmospheric temperature and humidities to which it is exposed. In housing construction in the U. S. A. it will generally equalize between 8% and 15% moisture content, depending largely on the area and the amount of heating in the house. Therefore, to gain fullest dimensional stability "in-use," lumber would actually have to be dried to 12% moisture content. At 12% moisture content, the shrinkage amounts to 4 to 5% of its green width. Since the majority of framing lumber is flat grain, the width is more critical. In drying to 12%, flat grain shrinks 4 to 5% of its green width. Vertical grain will shrink only ⅓ as much in width as will flat grain. Therefore, framing lumber dried to 12% moisture content can be used in all climatic zones in the U. S. for house construction.

In drying to 19% moisture content, dimension lumber would be expected to shrink about one-third to one-half as much as when dried to 12%. The remaining shrinkage would be expected to develop later.

• Drying to 19% moisture content is no guarantee that lumber will be free from further shrinkage. However, costs and marketability are important factors when drying below 19% and must be considered in relation to product improvement "in-place." This applies to all species. This should actually be subject to studies suggested in this article.

• Regardless of the original moisture content of lumber at the mill, humidities and exposures encountered during shipping, storage in distributing yards and during construction, may all bring about changes in moisture content of the wood.

• When unseasoned lumber is used for frame construction in housing, shrinkage in place after fastening the pieces together will cause distortion. This is due to uneven shrinking of the framework as it rests on the foundation walls or supports, unless the framework is especially designed to provide for even shrinkage.

In ordinary design there is less shrinkage of wood at outer walls because there is less wood supported by the outer concrete foundation walls than in the center support beams. Drying dimension lumber to 19% before construction materially reduces the amount of shrinkage and resultant dislocation which will later develop in-place, but drying to about 12% before construction would be required to eliminate it.

• The strength of wood increases as wood becomes dryer. The strength gain is at a greater rate than strength loss due to shrinkage of lumber to a smaller size.

The cause and effects of distortion in lumber, such as twist, crook and warping, do not start in the sawmill, nor are they necessarily caused by drying. They may begin in the growth of the tree and move all the way through the production line to the finished product.

Well manufactured framing lumber of normal growth and free of stresses, does not crook or twist when green, nor seriously in the kiln drying process. Likewise, it will not crook or twist when incorporated in a structure and seasoned "in-place" to a lower moisture content.

Framing lumber of abnormal growth characteristics which may include compression wood and juvenile wood or cross grain, will crook, warp and twist in drying to 19% moisture content and will warp and twist further when incorporated in a structure and allowed to season in-place to a lower moisture content. Drying this type of wood "in-place" emphasizes building distortions.

Let's get at the basic problem: In all the years of controversy on seasoned and unseasoned framing lumber, the industry has made no concerted attempt to attack the heart of the problem based on facts. Actually there is no point in discussing the qualities of either green or dry lumber unless we begin with the cause and effect.

We are dealing with two factors that cause most of the difficulty, or so-called "failure" of performance. They are decay and shrinkage-caused distortion. Some regions of the nation have little problem with decay. Distortion caused by shrinkage is common to all areas when lumber dries or shrinks in-place after framing; some more than others due principally to effects of temperature and humidity. Obviously lumber manufacturers cannot "tailor-make" lumber for each region and dry for specific climates and therefore, must aim at a practical medium.

The answer to the controversy might appear to be relatively simple. However, it is not so easy as it appears as economics are difficult to cope with and the definition of the common goal has been confused.

We can define the goal as that of (1) freedom of risk of stain and decay and (2) appreciation of improved end-product before the product is fashioned into end-use. Basically it starts not with drying, but first in eliminating the abnormal growth wood from structural uses, within sound economic limitations. This would involve the restraining of such wood from reaching framing markets and re-directing it for other more suitable uses.

Decay chances can be eliminated, we know, by reducing the moisture content to below 20%. This is a specific for this problem.

The question remaining is how to gain best control of lumber at the point of installation so there will be no problem in assuring the builder of the best behavior in

(Continued on page 50)

Southern Mill Increases Volume and Grade

of production with extensive 10-year modernization program.

The past ten years have marked a continual period of modernization and expansion for C. Arnold and Son at Cullman, Ala. Beginning with a new location for the sawmill in 1948, provisions have been made for increased facilities, more concentration area, and a plant layout and equipment aimed at maximum use of logs and the material cut from them.

Consulting sawmill engineer William Cahoon, planned a modernization program which includes the following:

▸ A steel and concrete sawmill building housing a 6-foot bandmill, a 6-foot band resaw, edger, and trimmer. The mill uses 23 men, from log checker to stacker. Production is 36,000 feet a day, mostly pine, with a little oak for the hardwood flooring plant.

▸ Modern electric power plant generating 1,000 hp by steam turbines.

▸ Company's own deep wells that supply 90% of water needed. Reserve lines connect to the city mains for emergency and excess water requirements.

▸ An all-metal shavings and sawdust bin to feed the two boilers with sawmill residue. A chainbelt conveyor brings chips, sawdust, and bark refuse from the hog under the mill to the storage bin. Planing mill waste is fed into the bin by blowpipe. The boilers are fed by belt and dutch oven.

▸ An automatic length separator which sorts the mill output ready to be removed to other manufacturing stages or storage by forklift handling.

▸ Double unit Moore dry kiln with a capacity of 70,000 feet on each side. Behind the dry kiln is a lumber grading shed 60 feet wide and 225 feet long.

▸ Remanufacturing plant. This is housed in a building 100x180 ft. Trussed roof spans provide maximum clearance of the plant area for material handling for forklifts. Equip-

Logs are located on elevated live debarker deck by Hyster fork lift which also unloads trucks and handles lumber.

Metal Matic metal detector by Soderhamn tests barked logs, automatically kicks off logs containing metal.

Edge sorter is 160-feet long, feeds 16 sort pockets. Only hand operation is placing lumber in stacks for folklifts.

Woods 415 M2 planer is one of two such units. Material is surfaced two sides at rate of 220 feet per minute.

ment in the remanufacturing plant includes two Woods Model 415 M2 planers, Woods 134 BM moulder machine, two Hermance machines, No. 300, for making end-matched pine flooring, resaws, ripsaws, and end matcher. The hardwood flooring mill is also located in this building.

▸ A storage shed 60x300 ft. with trussed roof spans to eliminate columns.

▸ Barking and chipping facilities, which include mostly Soderhamn equipment.

▸ Window unit plant. Space in the original building at the downtown site which once housed the main sawmill was completely remodeled to expand and modernize the window manufacturing end. New equipment was added and assembly line production laid out so that the plant can turn out 100 window units and 300 windows per day. One section is devoted to custom window work, making window units to order for contractors and others in the area. This plant utilizes considerable material not suitable for flooring and moulding manufacture at the remanufacturing plant. Shavings from the operation are blown into the old dry kiln and sold to the poultry industry for litter.

▸ A new three-block, 40-inch carriage for further efficiency in sawing logs. Carriage cuts with an accuracy of 1/32 inch and does a better job of handling crooked logs. Slabs are run through the horizontal band resaw to obtain every possible foot of useful lumber. Usable edge strips are sorted and converted into stacking strips and other products. The unusable part of the log left as slab trim is run through the fuel hog.

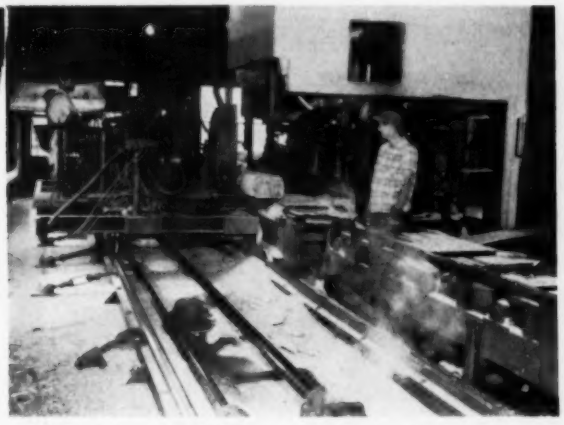
All lumber is graded under SPIB requirements and sorted on leaving the kilns and in the remanufacturing plant it is again graded after each operation. Lumber, for example, that is culled from the flooring machine, may end up as several types of moulding, or as part of a window or window assembly. Even the end trim, too short for any product manufactured, is made into stakes for the highway department.

EQUIPMENT

CAMBIO 26″ debarker; FILER & STOWELL carriage; WHELAND head bandsaw; edger with automatic tailoff, undercut trimmer; ALLIS-CHALMERS resaw; SIMONDS saws—head band is 12″, 15 ga. swaged to 8 ga.; SODERHAMN 60″ chipper, chip screen, conveyor, metal detector; WESTINGHOUSE motors —100-hp on chipper, 5-hp on screen; WESTINGHOUSE steam turbine and AC generator (940 KVA).

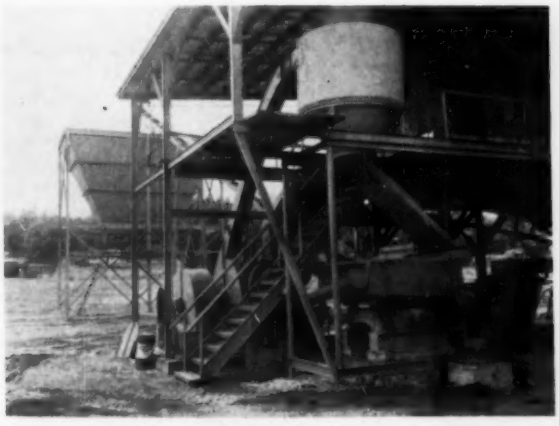
POWELL-WRIGHT boilers (2)—250-hp and 270-hp; ARMSTRONG saw grinding equipment; MOORE dry kilns; WOODS planers, feed tables; YATES V60 vertical resaw; HYSTER forklift; U. S. VARI-DRIVE motors on boiler feeds.

Top view of log haul showing 4-strand live log deck, Filer & Stowell carriage and Wheland 6-foot band headrig.



Offbear side of Wheland 6-foot band showing Filer & Stowell 3-block carriage and 12-inch steam gun drive.

Moore steam-heated dry kiln is a double unit with capacity of 70,000 feet on each side.



Chipping installation, mostly Soderhamn equipment, includes chipper, screen, conveyor to hopper in background.

Better Utilization: key to continued profitable operation of the medium-sized mill, requires upgrading of equipment. Here are some changes made at a California pine mill cutting 90M a shift. There will be more.

Scott Lumber Co. at Burney, in Shasta county, Calif., installed a barker. It began shipping chips. It did away with its burner. It built a bark fertilizer and soil conditioner operation. And it's constantly looking for ways to recover more fiber from every tree.

"In today's business picture, the question is whether the operator can afford not to invest in equipment which will upgrade the mill and produce higher returns from every log handled—rather than whether he can afford such outlays for one or more pieces of new equipment." This is the opinion of Scott's vice president and general manager, Raymond H. Berry.

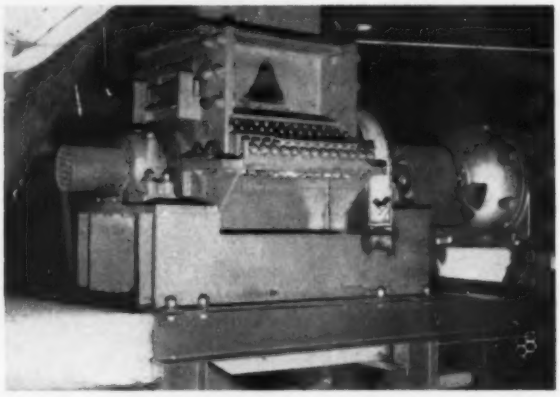
Changes noted on these two pages have been made during the past year and others likely to be made. These are not unique changes, but they represent a trend both desirable and necessary.

"Our idea here at Burney is to gain the greatest possible utilization of the raw material from the logs we do harvest, rather than to simply go out and cut a wider swath through the woods.

"And I'm happy to say that we're in the black in our upgraded operation. Timber must be conserved and therefore the logged timber must produce the greatest possible volume of assorted products."

But mechanical recovery of fiber can go just so far. The next big leap is chemical utilization. There is pressing need for medium and smaller operators to have a means of disposing of remaining refuse profitably.

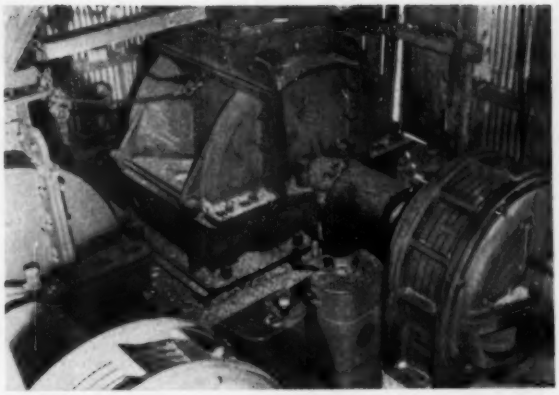
Scott runs two shifts year 'round in the sawmill. It runs one in the planer and one in the bark fertilizer plant.



Bark utilization involved installation of 60-inch Nicholson ring debarker. Screen protects operator on three sides and overhead. Arch section at left is part of shop-designed device to prevent small logs from whipping out of the log haul. Also working in bark utilization program is Jacksonville Blow Pipe Co. Blo Hog (above). Power for hog is a 100-hp G.E. unit. A 100-hp U. S. motor powers the blower system serving the cyclone and hopper pictured at right.

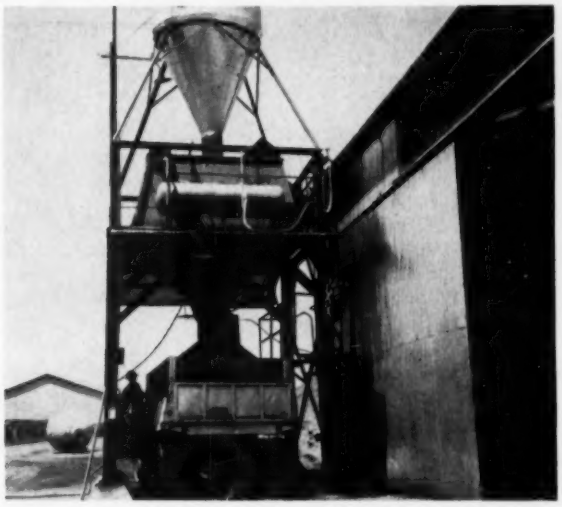
Chip production. Filer & Stowell unit (left) recovers about 21 units of pine chips from 80M feet of logs. New six-car siding is at right. Chip blower tube is at left, tube overhead is from planer to fuel storage. Western Machinery Corp. tow is used for chip car. Cars are loaded one end to middle, opposite end to middle, then the remaining middle wedge—to insure easy unloading at destination.

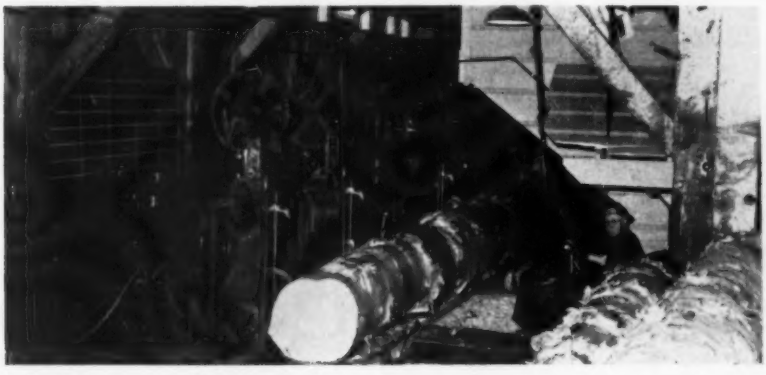
New fuel handling facilities were installed and nearly all conveyor systems replaced when the burner was eliminated. Building houses two new hogs. Conveyor at left is from mill, feeds hogs. Cyclone above outfeed conveyor from hogs is handling planer mill refuse. Back feed into the boilers, from fuel pile, is by way of underground conveyor. It reappears at right base of building. Inside, fuel is shifted to another conveyor (obscured here by water wagon) and then goes across top of boilers, or, if surplus, to storage.



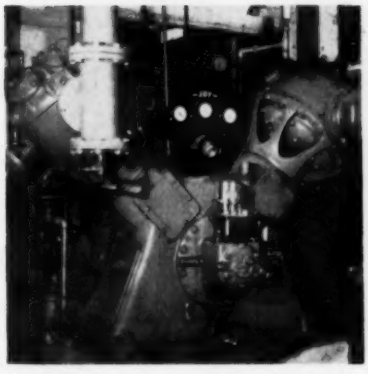
Twin Sumner 65 hogs have General Electric controls. Power is from twin G.E. 200-hp motors. A problem arising when chips and bark are removed as potential fuel was a shortage of fuel. This was remedied by installing a hog and blower system in the planer building. Refuse from the planer building now goes direct to the fuel storage house. If that is full, it is then diverted to the outdoor storage, through the cyclone (shown in the photo at left). Fuel production and requirements now are in balance.

Nitrogen is sprayed on bark from tank alongside hopper. Treated bark is hauled uphill to storage area behind building where it lies for six months before its return to building through hopper at roof level on storage site of building.



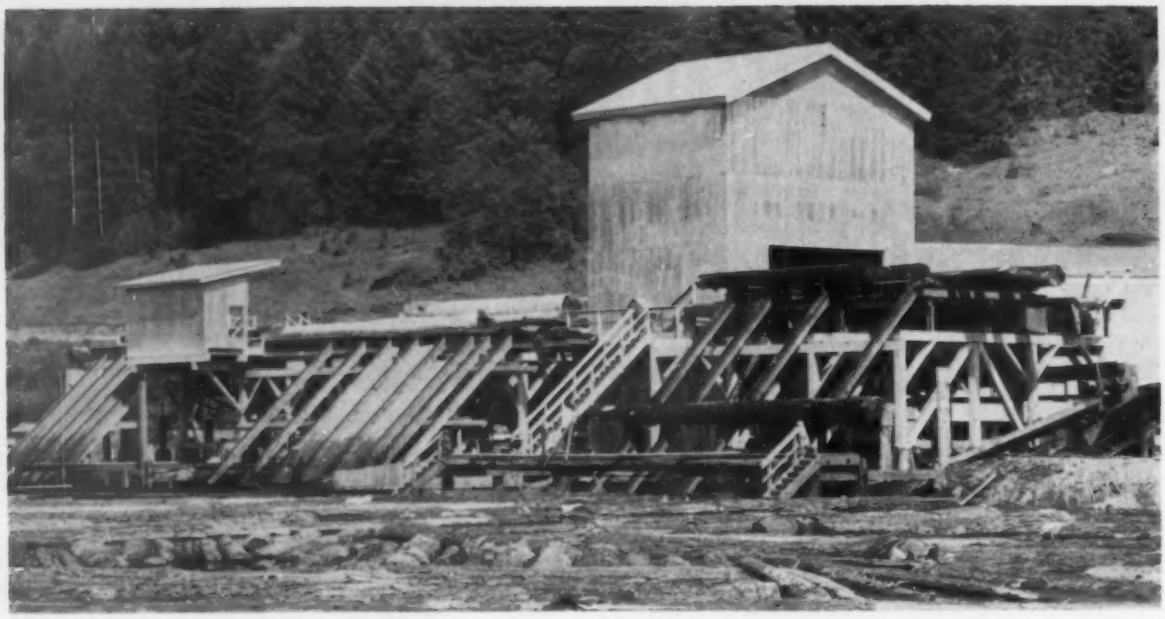


Selectric remote setworks on 6-foot Filer & Stowell carriage is another upgrading step. Carriage has 6-inch opening. Filer & Stowell 9-foot headrig had new power source of a 300-hp G. E. motor.



More air for operation is supplied by Joy Manufacturing compressor. A Renz metal detector has been added.

Centralized Barking and Block Cutting System



Teamed in the system at Robert Dollar Co., Glendale, Ore., are a Nicholson 60-inch barker, in larger building at right, and a 2-saw L-M Equipment Co. automation unit in the smaller building at left.

The installation is located on the larger—18-acre—of two inter-connected ponds which provide storage for logs going to the firm's veneer plant and sawmill. It replaces a barker formerly located in the veneer plant. Barked logs are provided for the veneer plant and sawmill.

The drawing at the right shows movement of logs.

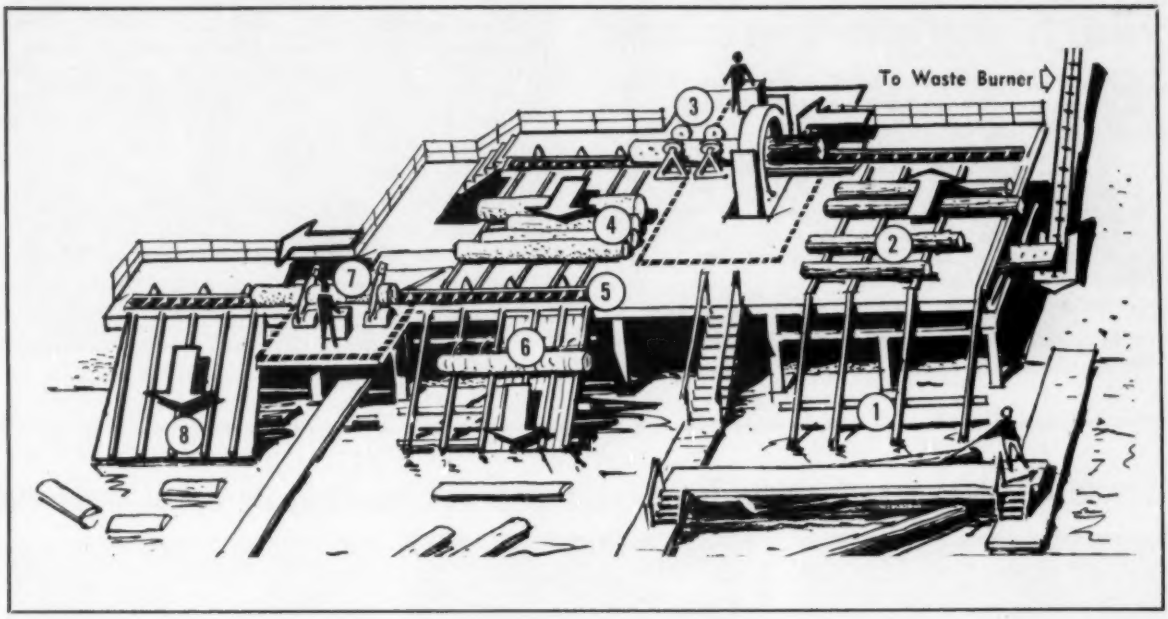
(1) Logs are poled from pond to a log side lift that carries them to the log deck (2) where they are passed through the barker (3) and then conveyed to the secondary log deck where a set of kickers transfers them laterally to the log deck chains (4) which may be controlled either by the barker operator or by the operator of the L-M automation controls at the saw station.

Chain conveyor (5) paralleling the pondward edge

Headed for the sawmill. This log has no peeler block yield so is pushed down chute to be floated to the sawmill. Water jets located a block-length apart show saw operator where to cut.

Two peeler blocks are the yield from this log. They were cut simultaneously by the pair of L-M saws, will now be pushed down the chute into the pond from where they will be moved to veneer plant.

Handles Over 350,000 Feet of Logs Per Day

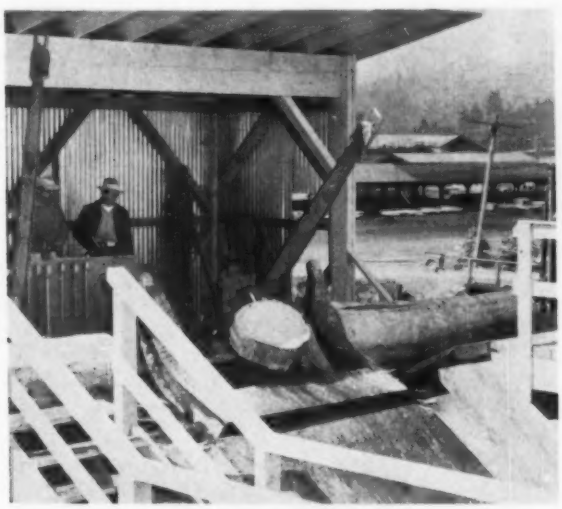


of the secondary log deck feeds veneer quality logs to the chain saw. Such logs are stopped at the conveyor by a series of stops actuated by the automation operator. If the log has no peeler material, it is allowed to roll over the conveyor and down an incline (6). If it does not roll of its own accord, it may be pushed by kickers. These logs go to the smaller 4-acre pond for use at the sawmill.

The two L-M saws (7) may cut one or two blocks which are then pushed down a second chute (8) into the pond. The remainder of the log is backed up by the operator of the automation controls and pushed down the log chute (6).

Peeler blocks channeled into the small pond are poled around the corner and into lanes set off by booms. Blocks are floated a short distance to the veneer plant.

Chains used in the installation were furnished by Portland Chain Manufacturing Co. and steel was fabricated by Fought & Co., Portland, Ore.



Lily-pad disposal device lifts and slides waste down chute in foreground into waste conveyor beneath the deck. The saw operation needs only one man. The second man is breaking in.

60-inch Nicholson barker. Nicholson Manufacturing Co. built the installation for Robert Dollar Co. The system was designed by F. W. Horstkotte & Association, Portland, Ore., engineers.

New Development in Packaged Lumber Handling

Fowler 3x3-Foot Package Offers Economies

Reason for the 3x3 package is simple; three of them fill a nine foot box car in width, J. C. Fowler, Fowler Loader, Williams, Ariz., explains.

In this method the packages are made up from the chain using 10- to 16-foot random lengths in one size package and 6- and 8-foot lengths in another. No strap is used on the long packages as the loader slings hold it intact until it is placed in the car. One ¾x.020 strap is placed around the short packages which are turned crossway the door of the car.

In loading, a 2x4 is nailed to the car floor 13 feet from the end of the car. After the first layer of three packages is placed, another 2x4 is placed directly above the first. The same procedure is used with the last layer of packages. This provides a progressive tilt of from 2 to 6 inches on the lumber and tends to keep it from shifting in transit.

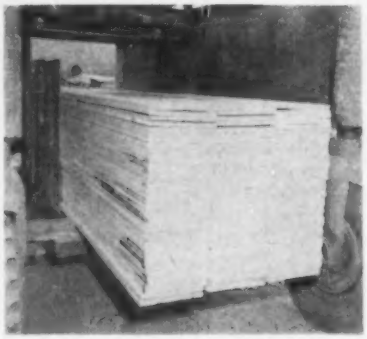
The cost of this type load for a 30,000 to 32,000-foot car breaks down this way.

1½ hrs. lift truck driver @ $2 per hour	$3.00
1½ hrs. helper time @ $1.60 per hour	2.40
Total labor cost	$5.40
Cost 6 2x4—9-foot dunnage @ $30 per M	$1.20
Cost of strap around three short packages	.36
Total dunnage and strap	$1.56

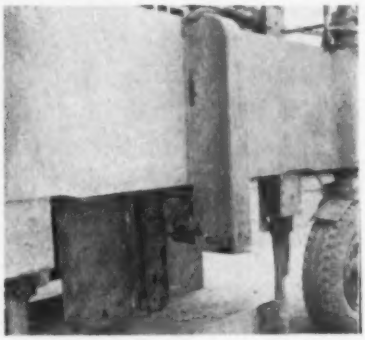
This gives an average labor cost of $0.18 per thousand feet and material cost of $0.05 . . . a total of $0.23.

Simple Attachment on Straddle Truck Compresses Lumber Packages Sufficiently Tight

Loose bundle of lumber which straddle truck has picked up from chain at Haining Lumber Co., Williams, Ariz. Space is exaggerated in this picture.



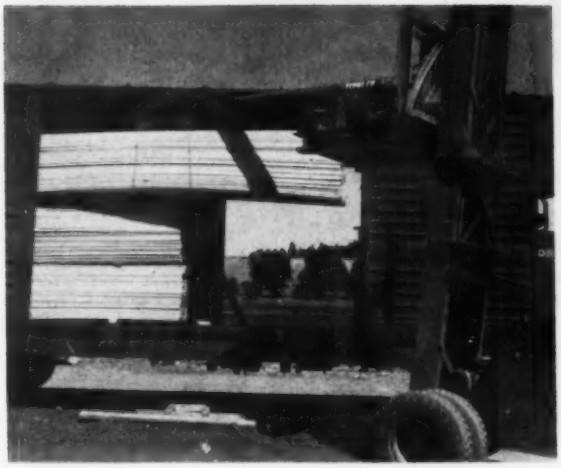
Tight bundle is achieved by the steel plates which have pushed in while the straddle truck was moving the load to the railroad loading area.



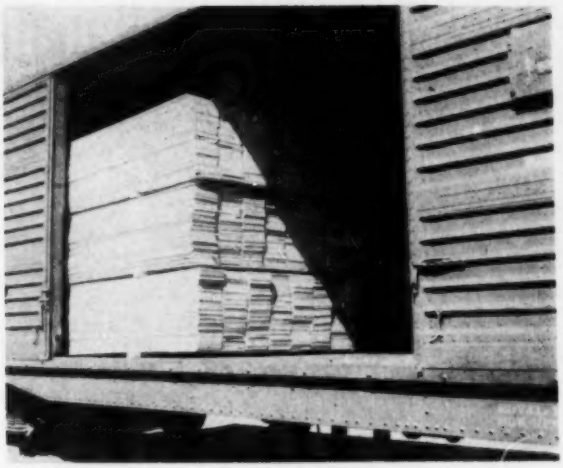
Brackets of ¼-inch plate welded to each side of carrier support the two double-acting hydraulic cylinders which exert pressure on plates.

Mod-U-Lift boom is equipped with swivel load carrier.

Mod-U-Lift loader holds lumber load securely at all times.

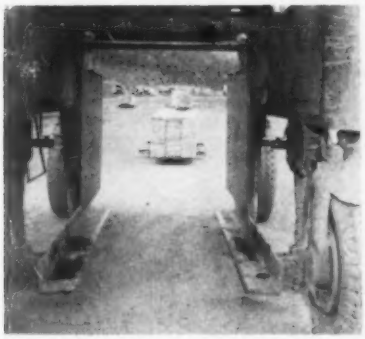


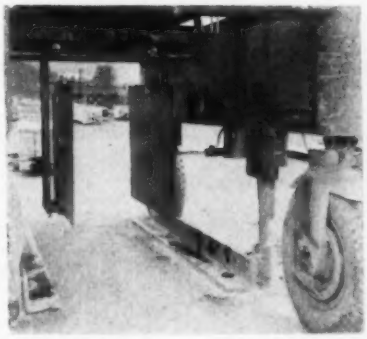
Final 3x2-foot unit is placed by Fowler loader.



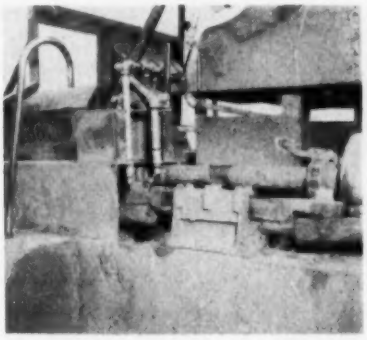
Result is a closely packed load of 3x3 packages.

to Prevent Coreing Regardless of Size Strap Used.





View through carrier, left, shows 4x4-foot, ¼-inch steel plates that form side of press. Also shown is shaft at top that supports plates and allows them to move in and out by means of rollers formed to fit the shaft. Photo at right shows the plates moved in.



Control valve is within easy reach of operator. Shown is two-way control valve and the piping to the two double acting cylinders on sides of straddle.

Lift Truck Attachments Allow End-Handling or Quick Rail Car Loading

McCracken Modular Paks of lumber are easily handled end-wise, or quickly placed in rail cars with lift truck attachments developed by Little Giant Products, Inc., Peoria, Ill.

Mod-U-Lift boom. The tubular boom slips on the forks of a 4000-pound capacity lift truck, will handle load capacities of 1000 pounds. It will easily handle unit loads of 400 board feet of lumber or 1200 square feet of ¼-inch plywood.

The swivel load carrier mounted on the end of the boom can be turned 360 degrees with a touch of a finger. Using the rig, McCracken Modular Paks 20 feet long can be loaded or unloaded in boxcars with 6-foot doors, eliminating the necessity to wait for wide door cars, often in short supply.

Mod-U-Lift end loader. The simple device has no moving parts. It consists of a U-shaped steel plate 22 inches wide with lower plate 42 inches long. It is fastened at the heel of the forks by metal stirrups. The over-hanging weight of the McCracken Pak in the end loader is sufficient to hold the load securely at all times.

When slipped on the forks of a lift truck with as low as 4000 pounds capacity, McCracken Paks can be end-loaded on or off trucks, in or out of lumber sheds. The Paks can be moved from pile onto delivery trucks in 30 seconds.

McCracken Modular Paks contain 20 board feet of lumber per lineal foot of length. The "A" Pak is 10x24 inches, a "B" Pak 12x20 inches. The Paks are available from a growing number of sawmills, in many cases without extra charge. The Paks can be handled unbroken from the mill to the jobsite, maintaining the mill condition of the lumber. They simplify inventory work; just count the number of paks and multiply the length by 20.

How Two Firms Handle Strapped Loads of Logs

Electric Unloader Handles Truck Loads Safely

Easy does it is the motto of Simpson Logging Co.'s new electric-powered log unloader recently completed and placed into service at the Shelton, Wash., truck dump. Over this dump go the logs from the many small contract loggers in the south Olympic Peninsula who cut and haul for Simpson.

In recent years, this contract logging has been primarily on second growth thinning lands, which meant a larger percentage of smaller logs. This in turn required an economical method of handling the logs at the dump and in the water. Logging manager Max Schmidt, Jr., and mechanical engineer Bob Kieburtz looked around the industry for helpful ideas on unloaders and then came up with the new dump pictured here, which is tailored to Simpson's own needs.

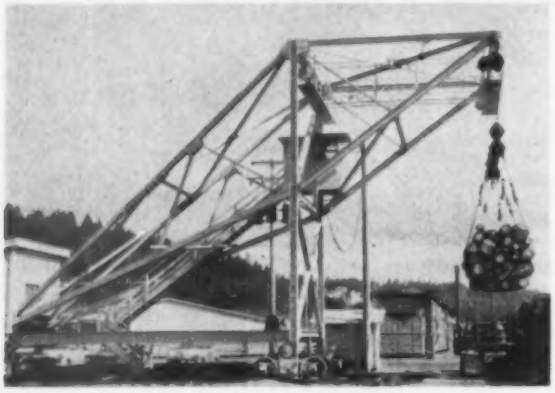
Log bundling, a new operation for Simpson, has given them three times the storage space over the old flat booms, plus the savings in booming and rafting time in the water. Adjacent to the bulkhead at the dump is an excavated pocket 100x200′ and 8′ deep, which permits log dumping into the salt water at any hour of the day regardless of the tide.

The unloader rides on a 90′ track.

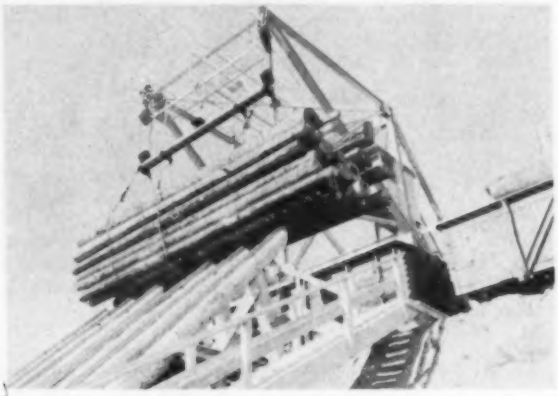
As a truck approaches dump, it stops at the scale platform, where the logs are scaled and the steel straps attached to the load. The truck next pulls into the unloader and wire rope slings pick up the load and lower it into the water—with no splash. This avoids breakage. While the unloader is putting the load into the water, a separate wire rope picks up the trailer and places it piggy-back. This speeds up the truck in getting back to the woods.

The slings holding the loads which are dumped into the water are automatically released by spring-loaded MAR Hooks when the tension is eased. The same hooks release the wire rope holding the trailer.

One change from many other



Crane unloads bundle of steel-strapped logs by moving forward and lifted logs over rail cars from which they were unloaded. Crane has 35 feet of horizontal travel.



Load is lowered slowly into the lake. With the rail skids taking a large share of the strain off the steel strap, it is possible to use but a single strap on most loads.

Crane Unloads Strapped Log Units Safely and Quickly

A log unloader installed recently by Potlatch Forests, Inc. at the Rutledge Unit, Coeur d'Alene, Ida., is the final step in an engineered plan of log bundling to simplify loading, unloading and storage of logs.

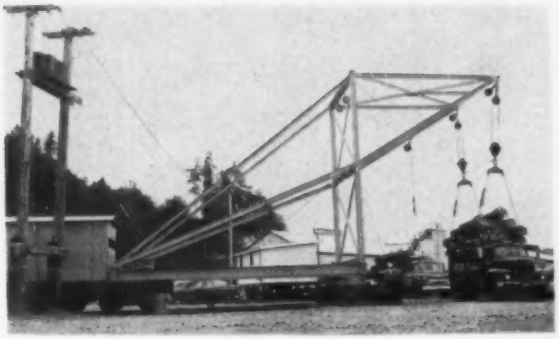
The Rutledge Unit consumes about 60 million board feet of logs per year. The mill is located on Coeur d'Alene Lake along an open shoreline offering no protection from storms and rough water. Under the old setup, this meant that ordinary bag-booming of logs was hard to handle. Another bugaboo to be licked was that of sinkers; much valuable timber was being lost and lots of time and effort spent in recovering sinkers.

Two men are required in the operation: a crane operator and hook setter.

The installation has accident-proofed log handlings. It has also minimized a former sinker problem. The only sinkers occuring now are near the mill when bundles are unstrapped. Salvage is concentrated in that small area.

Another feature of the system is that the pair of wire ropes forming the cradle stay with the car permanently. As soon as a bundle is dumped in the lake, wire ropes are returned to the car floor and transported back to the woods

Safely and Efficiently



Unloader picks up load from truck preparatory to lowering it into pond. Extra wire rope loads trailer on truck.

Load is lowered into pond where it will be automatically released by spring-loaded Mar hook when tension is eased.

dumps in the industry is that the unloader operator is stationed alongside the load, rather than in a cage or back at the power winch. This gives the operator a clear view of the whole procedure.

Crane controls travel of log bundle all the way to the bottom of the incline. The release hooks will hold the logs until pressure is eased.

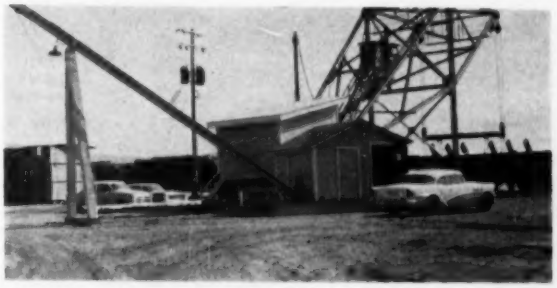
As load dips into water, pressure on hooks is gradually reduced and they spring open to release bundle. Each bundle entering water pushes previous bundle into open.

landing. These wire ropes and new steel straps are then placed in the proper position for loading.

Only 10 minutes are required to remove logs from the car or truck, dump them into the water and prepare straps for the next load.

Principal equipment includes: Westinghouse Electric motors (75-hp on motor on hoist, 7½-hp on travel), and controls, Pacific Western Gear winch on hoist, Falk gear drive with chain sprocket on crane travel, Skookum automatic release hooks.

Equipment was engineered by Robert Bowling and his Potlatch staff and fabricated by Union Iron Works, Spokane, Wash.



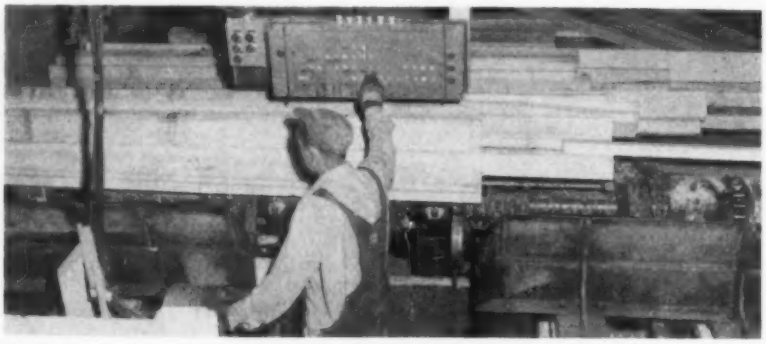
Trailers are loaded back onto trucks by drivers at this electrically operated hoist. The power house, center building, is built onto crane and moves with it back and forth.

Variable Speed Drive Solves Fuel Flow Problems

Hughes Bros. Lumber Co., Foresthill, Calif., formerly burned all refuse but recently switched to a boiler operation when it began kiln drying its stock. Fuel surge was a problem, with erratic intervals of high and low feed. With installation of this variable speed drive on the chute from fuel house to boiler oven, the flow has been made steady, fuel lasts longer, and flue cleaning is easier and is done less often. Prior to installation of the drive, flues were cleaned weekly or oftener. Since the installation the interval has been stretched to two weeks. Cleaning is done with a wire brush and only about a half a wheelbarrow of clinkers is accumulated in two weeks. With a steadier flow of fuel, the fuel house will provide steam for the kilns over a week-end and even over a three-day holiday. However, the mill is installing a hog to boost fuel supply by 10% and gain a safety factor.

Here is the control handle and the notched arc of steel plate which forms the speed settings on the shop-built device. The top-most notch is "high" feed. Setting on machine in photo is "low." Note angle iron mounting for motor and axle on which motor is counter-balanced.

Automatic Setworks Aids Edging, Resawing at Rosboro Lumber

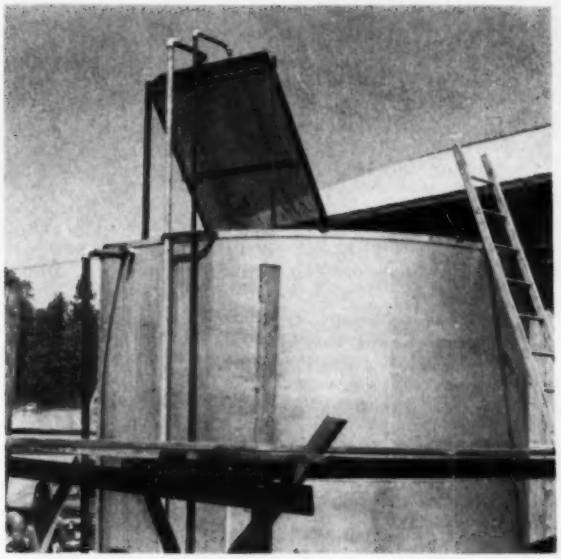


Resawer makes set for Sumner resaw from C&D setworks control panel at Springfield, Ore., mill. The plant also has two automated edgers.

How to Square Long Lumber

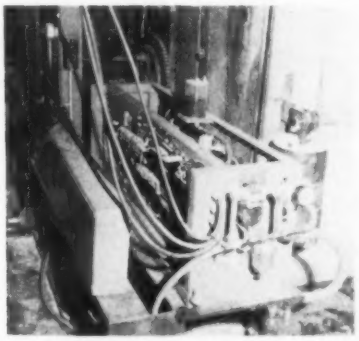
Squaring of long lumber on sorting chain on offend of planer was solved by Haskins Wood Products, Swisshome, Ore., by installation of a short vertical belt which allows trailing end of piece to catch up with head end. The head end of the long pieces hits the chain first and starts to move down the chain before the tail end arrives.

The steel square (arrow) set on corner in the oven feed chute, contributes to the efficiency of the operation. Fuel hitting it is deflected more effectively across the grates. The rod in the center is attached to the side of the chute. Boiler is a 213-hp Gabriel unit.



To help lower the temperature of water in the recently installed boiler system for its new kiln operation, Hughes put in a section of expanded steel, shown above the tank. Though moderate in size, the grid has helped drop the temperature of water trickling across it.

Resaw feed end has one man feeding stock to Sumner 7-foot vertical resaw.

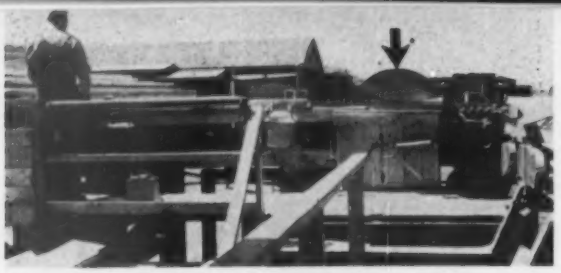


Actuating unit to move saws on edger uses air-power arms, panel-controlled.

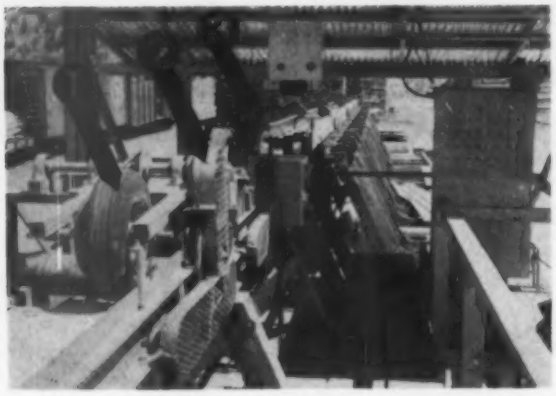
Control panel for the main Sumner edger provides large variety of sets.

End Stacks Easily Handled

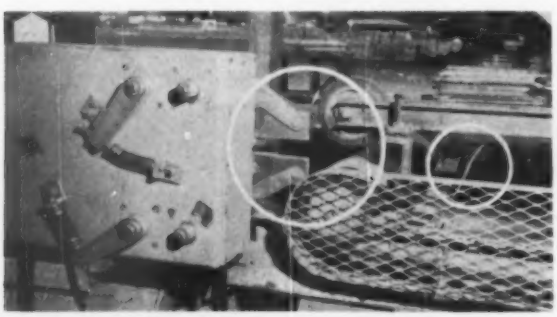
An idea originally presented in THE LUMBERMAN has helped the Birdseye Veneer Co., Escanaba, Mich., solve a handling problem. The company uses a Clark forklift equipped with 360-degree revolving forks to handle crated veneer in the veneer plant and warehouse. Packages of crated veneer, stored on end, were hard to handle manually. The revolving forks make it simple.



1 Key to uninterrupted flow of lumber on sorter is the fact that the feed chain spacing regulates flow. This prevents pile-ups. The breakdown man here feeds the operation. All stock passes a trim saw (arrow) and drops onto belt conveyor. Powered rolls move the stock from the belt. It then passes through a counter-balanced gate, which firms it against the side bar.



2 Out of the gate, stock goes under the pressure wheel in foreground (1). This is a rubber tired, dead-weight wheel. It then goes under a second dead-weight wheel (2) just before entering the scanning jaws. A third wheel (3) is part of the moisture detection unit. When not in use, it is raised above the level of the other two. Moisture detection is by means of two parallel knife-edge probes on the wheel. They will probe a 16-foot board four times. Signal is registered on the small panel at top center. The main panel is at right. On this panel the four horizontal lights are, top to bottom: SCAN, MEMORY 1, MEMORY 2 and CARRY OFF READY. Signals register top to bottom on that order as the scanners work, the kick-out actions take place and the way is cleared for the next board. There is also a button for manual cancel. This unit is being used to sort 5/4 and 6/4 stock at the same time.



3 Heart of the system is the thickness scanner. This is the box at left and the scanners are the jaws now awaiting next board. Ahead of the scanners and behind are wire trips which insure that scanning will not take place before the first 18 inches have passed the jaws nor after the final 18 inches have passed.

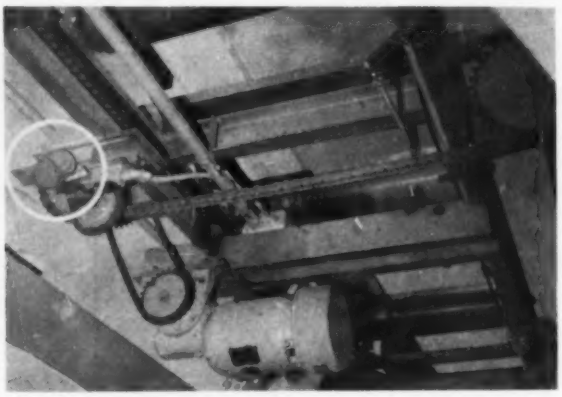
Thickness Sorter relies on memory panel, requires only 2 men

The sorter, installed at the Dorris, Calif., plant of the Dorris Lumber & Moulding Co., Sacramento, handles 40M feet a day on a 5/4" basis—8 hour shift. One man breaks down the stacks and feeds the sorter, the other is a tail-off man. All else is automatic. Lowered costs and increased accuracy in sorting are gained with the sorter.

The unit is used to separate ponderosa pine and sugar pine lumber for production of mouldings. An integral part of the sorter is a moisture detector. This is used only when the moisture content of a shipment is not definitely known or if a shipment is known to have been exposed to weather.

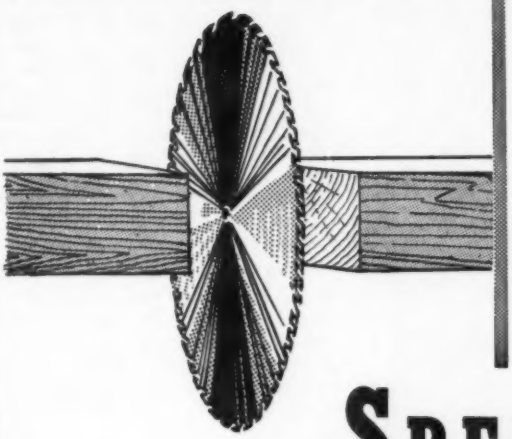
Monarch Forge & Machine Works fabricated the unit. Electronic components were produced by Electronics Specialties, Inc.

4 View from memory panel position shows the manner of mounting the side gates which keep the stock in the live rolls until it reaches the appropriate kick-out position. The sides are hinged on the long shaft at top. Some of the top-mounted counter-balances for the gates are visible.



5 Control center for one of the four cross-transfer chain arrangements. Circled is indented disc on which rides wheel for Allen Bradley Co. limit switch. This actuates lugs on each chain, three chains to a bay, and the lugs are positioned at the sides when at rest. Chain power source is the Reuland Electric Co. ½-hp motor, with magnetic brake. There are three flipper plates sticking above the live rolls in the first three bays and four in the final bay. The fourth is to signal delivery of over-the-end pieces.

Taking a bite out of your costs



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12 Ways to Help Solve the Seasoning Controversy

(Continued from page 35)

lumber. Thinking must be from the customer's viewpoint. It must not be how lumber behaves when it leaves the mill, but how it will perform for the customer in "end-use," for it is finally the customer who determines how long we will stay in business.

The industry's lack of knowledge of its own product behavior is probably one of its real weaknesses. Researching the behavior of wood "in-place" in structures, under all types of conditions and in all climatic regions on any important scale, is yet to be done by the industry. The Forest Products Laboratory has a great deal of accumulated information in over 50 years of observing wood behavior.

We have examples or specific cases of performances and lack of performance. There has been no real controlled study with the purpose of finding out what has to be done to provide the builder with the best quality products to fit all circumstances.

It is rather glaring that an industry of this proportion, in all these years, should not have established such a joint program to obtain the real facts upon which to base product manufacture, instead of calling each other names for the delight of the competitors.

It also seems a little incredible that the lumber industries have been willing to leave research, with few exceptions, up to the public research centers —and even here, too, have failed to lend substantial financial support. *Wood research is basically an industry responsibility.*

Framing pieces are basic parts of the structure. Unfortunately many builders have not been too much concerned with moisture content in construction practice. We know that, as a building material, lumber takes a horrible beating from weather, yet it stands up better than any other product. In spite of this, we see markets slip away and substitute products hammering away at more lumber markets.

At the Wood Industry's Products Planning Conference held in Washington, D. C. last March, Mr. William J. Levitt, Jr., of Levittown, New York, one of the nation's largest homebuilders, had this to say: "I do not think that the lumber industry is backing up their product enough so that basically unsuitable substitutes are not permitted to get off the ground. We have found out over the years, that because of the lumber industry's inability or unwillingness to establish the proper criteria for their materials, agencies such as FHA have been getting more stringent. At least from our point of view and our analysis of the new Minimum Property Standards, they are more stringent in the use of lumber for certain basic framing procedures. As a result, the homebuilders are looking for ways to circumvent the use of lumber and to satisfy the performance requirements of various codes that do not recognize the true properties of lumber as they exist today."

Mr. Ralph Johnson, director of the National Association of Home Builders Research Institute stated at the same conference that: "As houses become better engineered, and this is happening on an accelerated basis, it becomes all the more important to have identified much more precise physical characteristics for lumber."

Here are 12 steps that could help resolve the situation. These will not provide the entire answer. They are a start, at least, and might go a long way in stimulating a solution.

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The problem can be resolved. The question is whether or not we want to.

1. An extensive joint industry program to study house construction should be started. Experimental houses should be constructed of all species of lumber, both green and dry and of all grades normally used. They should be located in each general climatic area and studied for factual results and conclusions.

Let's find out whether or not lumber should be dried to 19%--15%—12% or not at all. Let's find out if certain areas may be served equally as well by either green or dry lumber.

2. Markets change and peoples' wants change. It is suggested, therefore, that the industry set up a constant market study program to keep pace with the direction of demands and learn how to constantly improve their products to meet peoples' wants.

The day is past for doing the same job in the same old way. Competitive products are spending millions of dollars yearly on market and product research and on promotion, in an effort to capture the lumber markets. The forest products industry must realize that it is now necessary to set aside just as much money for product and market research as it does for promotion.

3. There is a growing urgency for establishing of the position of quality control supervisors in basic sawmill manufacture. These men should have full authority to interrupt operations at any of several check points, if product quality is falling below standards. One firm has seven check points on quality with the final check just before the lumber is loaded on the car or strapped into bundles for loading.

4. The lumber manufacturers' responsibility for product quality may go beyond the mill. Protection of lumber from atmospheric conditions at the mill, continues to carloading, through shipment. Means of properly handling and protecting lumber at the seller's level and at the point of construction, need study. A study of packaging, handling and care of lumber in delivery and construction is sorely needed.

5. Strictly enforced controls of grade and trademarking of every piece of lumber will come. It should be welcomed and expedited by manufacturers. This would provide a quality protection guide for the assurance of proper on-the-job performance. It would be a guide for both the consumer and for code authorities. There is no other product of comparable proportion where the point-of-sale is allowed to rehandle the product and resort or adjust it according to his own desires.

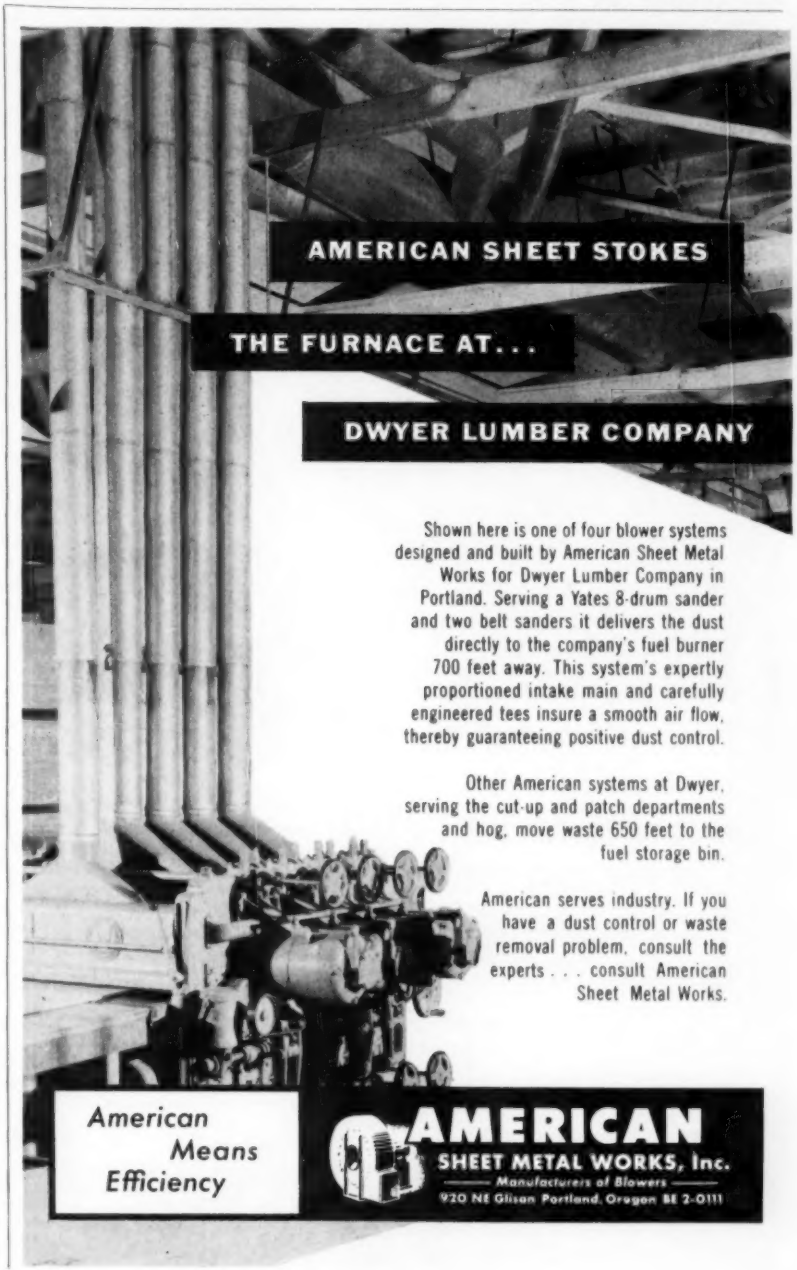
6. A study of timber and the extent which abnormal and normal woods may be segregated when used for framing purposes, should be examined minutely. Here is the beginning of the quality of the lumber.

7. A study of methods to control the product through the retailer to the ultimate consumer should be made: A hard hitting educational program directed at the dealer and builder should then be devised to back up the findings.

8. Many of the characteristics in wood may be corrected by proper sawing, according to many top experts in the field. Here is an area that needs considerable study, both as to methods of sawing and equipment used.

9. The market place is the final determining factor on whether all framing lumber is to be dried or not to be dried. If the markets demand dry lumber it will be dried. If they continue to want green lumber, green lumber will continue to flow to markets that want it, as long as the results are satisfactory.

(Continued on next page)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Shown here is one of four blower systems designed and built by American Sheet Metal Works for Dwyer Lumber Company in Portland. Serving a Yates 8-drum sander and two belt sanders it delivers the dust directly to the company's fuel burner 700 feet away. This system's expertly proportioned intake main and carefully engineered tees insure a smooth air flow, thereby guaranteeing positive dust control.
Other American systems at Dwyer, serving the cut-up and patch departments and hog, move waste 650 feet to the fuel storage bin.
American serves industry. If you have a dust control or waste removal problem, consult the experts . . . consult American Sheet Metal Works.
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AMERICAN
SHEET METAL WORKS, Inc.
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However, there is this chance, if the industry waits for the market place to decide—it may be too late. The producer hasn't been too concerned with what has happened to wood in-place. If he does not become concerned he may well lose many more markets. An alert industry should certainly be ahead of its markets and have predetermined just what is its best possible product, then seek to educate the market. It cannot shrug off this responsibility.

10. Markets are changing. The fast moving trend toward component construction and glued-up, engineered wood structures are farther advanced than is the general conception of the industry. It has been variously estimated that within the next 10 years, 60% to 70% of construction lumber may be directed to glulam, component and prefab markets. These markets today are asking for 15% maximum moisture content and preferably under 14%.

That means the problem of whether or not to dry, or even to dry to the 19% moisture content, may really mean very little as we are talking about it today. In this event, it is a self-curing process and one that will automatically eliminate those who do not prepare their products for these markets. This means drying to a very specific moisture content under much more rigidly controlled conditions than we have today.

11. It is suggested, therefore, that the seasoning controversy between all areas, should be shelved until more facts are at hand. They should be laid aside pending the construction and study of test houses and until comprehensive market surveys and studies can be completed.

Certainly it will take some time, but once completed, there will be factual information to provide manufacturers with a realistic look at their products' behavior and at the market trends. It will be solid foundation for decision making.

This is not offered in any sense as a "delaying" action. It is offered as a realistic means of settling controversy that has been flaming for over 30 years. Two or three years more in finding facts will be of little consequence in over-all time, and may be well worth the investment to the entire timber industry.

In the meantime, all regions should wholeheartedly join in the national campaign to sell wood while researching for facts.

12. Study and list all points on which all regional producers agree. List all points on which there is disagreement. Set about objectively to resolve points of disagreement in a reasonable and fair manner. Set up a code of ethics.

At the Wood Industry's Planning Conference, last March, architect S. B. Slaughter, Jr., AIA, New Richmond, Wis., and a member of the Lumber Dealers Research Council had this to say: "Primary objectives of the lumber dealers Research Council is to cut down on the costs of on-the-site construction as much as possible." Mr. Ralph Johnson, director of NAHB Research Institute added this: "We would like to cut the building cycle from two months to two or three weeks."

Some of the objectives which the panels cited at the Planning Conference to reduce costs are listed here:

- Standardization of parts and dimension.
- Combine as many functions as materials or parts as possible and to use more components to save time on the job.
- Eliminate seasonal fluctuations as much as possible.
- Reduce on-site labor and fabrication labor.
- Help builder cut down the amount of equipment he needs for construction.

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• Deliver lumber and other materials to the place of use to save double handling.

• Cut price fluctuation problem of lumber.

• More factory machine time, where production and volume and quality can be controlled in a component.

• Responsibility of lumber industry to improve design and engineering of frame structures, and assist builders into putting these things into practice, with new shapes, new types of room, new forms of the house.

This whole program must be considered from only a long-range standpoint. By long-range we mean five years—10 years—and 40 years hence.

The same economic factors behind all change are working as surely in the lumber industry as they are in all other industries. We must remember that even today, there are nailable metal studs, metal trusses and joists; aluminum windows, siding and roofing; and plastic doors and walls.

Mr. Harry Weese, architect AIA of Chicago, Illinois, said at the Wood Industry's Planning Conference that, "if the industry is going on adding to its luster, it is going to have to leave not a trail of cheap houses behind it, but rather a trail of new communities adding to our existing base. We are not building a "throw-away" kind of obsolescence, we are building communities for the future."

Lumber is fast becoming just one form of wood utilization. Not many years ago it was the *only* utilization of trees. Then came plywood, a quality controlled panel product that is rapidly approaching lumber manufacture in total product value. Following this has come hardboards, and particle boards, both of which have real potential growth. Glued laminates and engineered wood products are only emerging from their infancy. Strangely enough, we are just beginning to find out what may be done by treating all types of wood.

Certainly the rapid growth of pulp and paper industry is changing many areas from wood to pulp economies and will continue to make more demands upon the wood coming from the forests in all regions.

The forests are changing—and so are wood markets. We wonder how many will finally have the courage to meet this challenge of change. It will require research, promotion, cooperation, understanding and common goals among all regions and producers. It will require a degree of leadership within the industry that it has never before approached.

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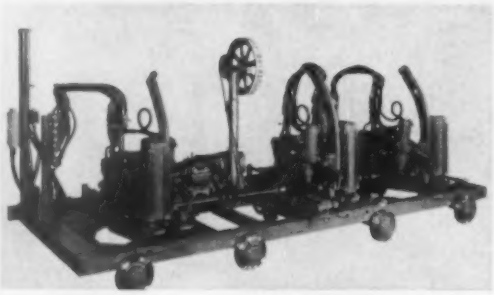

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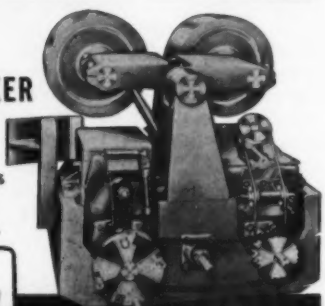

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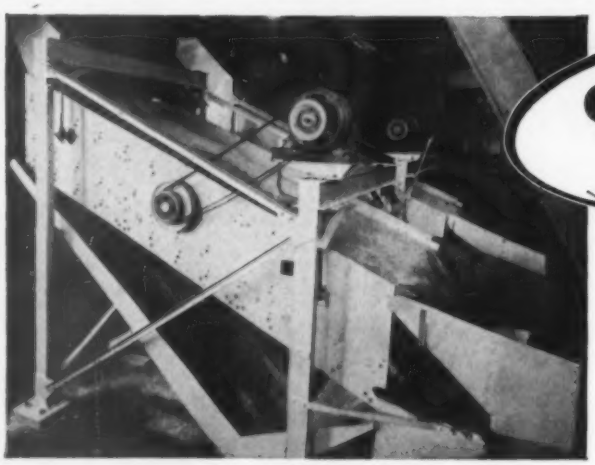

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NOMINAL QUOTATIONS

November 5, 1959

STOCKS	Paid 1958	This Month Bid	This Month Ask	Last Month Bid	Last Month Ask
Ambassador Oil, Com.	$ ----	3⅜	3¾	3½	3¾
American Forest Products, Com.	1.00&S	34	36	34	36
Anderson Tully Co., Capt. Stk.	20.00	310	OW	280	OW
Atlas Plywood, Com.	----	13	C	13⅝	C
Atlas Plywood, $1.25 Pfd.	----	23	25	24½	26½
Biles-Coleman Lbr. Co., Com.	*	18	OW	18	OW
Boise Cascade Corp., Com.	.60	47	49	50½	52
George E. Breece Lbr. Units	.30	2½	OW	2½	OW
British Columbia Forest Prod., Com.	.08	12¾	C	13½	C
Brooks-Scanlon, Inc. "A"	.55	18½	OW	19½	OW
Brooks-Scanlon, Inc. "B"	.55	18½	OW	19½	OW
Calaveras Land & Timber Co., Com.	2.00	27½	OW	27	29
Calcasieu Paper Co., Com.	1.50	25	OW	25	OW
Cascades Plywood Co., Com.	1.75	34	35½	35½	36½
Central Coal & Coke Co., Com.	1.00	29	31	28	30
Cherry River Boom & Lbr., Com.	----	33	OW	34	OW
Chicago Mill & Lbr. Co., Com.	1.25	25	27	24¾	26½
Cloquet Lumber Co., Com.	*	1	OW	1	OW
Consolidated Naval Stores, Capt. Stk.	30.00	825	OW	825	OW
Container Corp., Com.	1.00	27⅛	C	27⅛	C
Container Corp., 4% Pfd.	4.00	83	C	84	C
Crossett Company, Class "A"	.60	44½	47½	47	51
Crossett Company, Class "B"	.60	44½	47½	47	51
Crown Zellerbach, Com.	1.80	54	C	55¾	C
Crown Zellerbach, $4.20 Pfd.	4.20	88¾	C	90	C
Curtis Companies, Com.	----	10¾	12	10½	12
Dierks Forests, Inc.	5.00	150	OW	138	OW
Evans Products, Com.	.25	18½	C	19	C
First Lumber Corp. Com.	----	12½	14½	13	15
Fordyce Lumber Co., Capt. Stk.	1.00	42	OW	40	OW
General Plywood, Com.	----	13¼	C	15¾	C
Georgia-Pacific Co., Com.	1.00&S	52¾	C	44¼	C
Harbor Plywood, Com.	.40	21⅝	C	20¼	C
Edward Hines Lumber Co. Com.	2.50	38	41	39	43
Insular Lumber Co., Com.	1.25	12	OW	12	OW
International Paper, Com.	3.00&S	135¼	C	127	C
International Paper, $4 Pfd.	4.00	88	C	89	C
Keyes Fibre Co., Com.	1.20	27	29	24¾	26¾
Kirby Lumber Corp. Com.	1.00	45½	47	45½	47
Longview Fibre Co., Com.	3.00	89	92	87	90
Louisiana Central Oil & Gas., Com.	10.00	50	OW	50	OW
Louisiana Long Leaf Lumber Co.	5.00	152	OW	152	OW
Louisiana Sawmill Co., Com.	----	¾	OW	½	OW
MacMillan & Bloedel, "B" Com.	1.05	38¼	C	38	C
McCloud River Lumber Co., Com.	4.00	115	OW	88½	OW
McCloud River Railroad, Com.	2.00	40	OW	35	OW
Meadow River Lumber Co., Com.	*	200	OW	200	OW
Medford Corp., Com.	7.00	270	280	270	280
Mississippi Land Co., Capt. Stk.	1.50	15	OW	15	OW
Northwest Paper Co., Com.	.80	37	40	36	39
O. & N. Lumber Co., Capt. Stk.	3.00	42	OW	42	OW
Olin Oil & Gas, Com.	----	16½	18½	17	19
Ozan Lumber Co., Com.	2.00	93	OW	90	OW
Pacific Lumber Co., Capt. Stk.	10.00	330	OW	315	OW
Pickering Lumber Co., Com.	.30	10	11	9½	10½
Pine Tree Manufacturing Co.	3.65	50	OW		
Pope & Talbot, Inc. Com.	1.00	35	38	36	39
Pope & Talbot, Inc., Pfd.	.30	4¾	5¼	4¾	5¼
Potlatch Forests, Com.	1.00	57½	60½	60	63
Powell River Co., Ltd., Com.	1.50	17⅛	C	17	C
Puget Sound Pulp & Tbr. Co., Com.	.80	27¼	C	24	C
Richmond Cedar Works Mfg. Com.	----	⅝	1⅛	⅝	1⅛
Richmond Cedar Works, Com.	----	1⅝	2⅛	1⅝	----
Ritter, W. M., Lumber Co., Com.	2.00	40½	42	41	OW
Roddis Plywood, Com.	.10	14¼	15¼	13½	14½
St. Regis Paper, Com.	1.40	51⅞	C	51¼	C
Southern Minerals Corp., Com.	----	4¼	5¼	4½	5½
Southwest Lumber Mills, Com.	----	17	18	15¼	16¼
Tremont Lumber, Com.	2.00	65	OW	65	OW
U. S. Plywood, Com.	1.62½	42¼	C	41¼	C
Union Lumber Co., Com.	1.25	58	OW	55	58
United States Lumber, Com.	.35	4¾	5¾	4¾	5¾
Upson Company, Com.	.80	12	13	11½	12½
Weyerhaeuser Timber, Com.	1.00	42¾	44¾	41	43
Winton Lumber Co., Com.	.92	15½	OW	15	OW
Wood Conversion Co., Com.	.40	14 ¾	16 1½	17 ¾	19 1½
Wooduse, Inc., Com. (Now Fersolin Corp. Com.)	----				
BONDS					
Georgia-Pacific Corp. Subordinated Deb., 5s due 1976	----				

* Information not available
OW—Offerings Wanted
x Split 2 for 1

BW—Bids Wanted S—Stock
C—Last sale on Exchange where listed or bid

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Wadkin Hydraulic Cross Cut Saws offer a potential output capacity much greater than possible with hand operated machines. Leave operator's hands free for handling stock through foot control hydraulic operation of saw carriage.

The C. J saws are available in 5 models for varying capacities and include a heavy duty model for cutting 49"x5" and another for 20"x7".
These machines are available with many accessory items for dado work, grooving, etc., and with a complete arrangement of tables and cutoff gauges. Massive for vibration free operation; precision built for accuracy.

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Pages 5-12-16 of this issue

a newsletter of the forest products industry compiled every two weeks & printed alternately in

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SIMPLE TO USE—Instantly indicates moisture content in Lumber, Veneer, Timber.

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INDUSTRY TRENDS

FIR PLYWOOD CONTINUES UP. Nine-month totals for fir plywood are well ahead of 1958: production is up 28.1%, new orders up 21.8%, shipments up 26%. Nine-month totals are: production 5.74 billion square feet—3.28 billion feet sanded, 2.46 billion unsanded; new orders 5.69 billion square feet—3.31 billion sanded, 2.38 billion unsanded; shipments 5.58 billion square feet—3.24 billion sanded, 2.34 billion unsanded.

REDWOOD SHIPMENTS EAST GAIN. Redwood lumber movement to eastern markets in the first half of 1959 increased nearly 24% over a year ago. Shipments to the eastern markets totaled 115.9 million feet, nearly 53% of the redwood lumber shipped. Shipments to the California market gained 20%. Movement of redwood to the Canadian market was 4½ times the volume of the first half of 1958.

MORE RAIL CARS. Three major rail lines have announced plans for major additions to their fleets, much of it in specialty-type carriers.

Great Northern Railway has purchased 25 flatcars and 50 trailers for use in piggyback hauls from California to the Pacific Northwest. Intial use for the $750,000 worth of equipment will be automobiles.

Northern Pacific has approved a $4.8 million car purchase consisting of 400 roller-bearing, wide-door box cars and 25 70-ton covered hopper cars. The wide-door cars will be delivered early in 1960. They will have 14-foot wide combination plug and sliding doors. The railroad's car expansion program calls for 800 of the new wide-door cars.

The Atchison, Topeka and Santa Fe Railway Co. has ordered 200 new piggy-back flat cars and 155 covered hopper cars. The piggy-backs will be available early in 1960. They will be capable of handling two 40-foot trailers. Any highway trailers will be handled without the necessity of a centering device.

PLANT, EQUIPMENT EXPENDITURES GAIN. Business outlays for new plant and equipment are scheduled at seasonally adjusted annual rates of $34.3 billion in the third quarter and $35.3 billion in the final quarter of 1959, the Department of Commerce and the Securities and Exchange Commission report.

Outlays are expected to total $33.3 billion for the year, up 9% from a year ago and 10% above 1957.

SALES-PROFIT PICTURE IMPROVES. Manufacturers of lumber and wood products experienced a pickup in sales and after-tax profits in the second quarter of 1959, figures from the Federal Trade and Securities-Exchange Commission show. Totals were up both from the first quarter of 1959 and the seconds quarter of 1958.

Second quarter sales of $1.71 billion compare with $1.42 billion in the first quarter and $1.33 billion in the second quarter of 1958. Profits after taxes amounted to $81 million in the second quarter, up from $43 million in the first quarter and substantially above $21 million in the like period of 1958.

For six months of 1959, profits after taxes figure at 4% of sales. In the first half of 1958 the figures was .9%.

WESTERN PINE TOTALS UP. Production of Western Pine species in the first nine months of 1959 is estimated at 6.75 billion feet, up 13.1% from 1958. Estimated shipments of 6.8 billion feet in the same period are up 12.8% from a year ago.

LUMBER PRICES

Douglas Fir

1x8	Utility S4S KD	$ 55- 60.00
2x4	Construction Dimension S4S KD	87- 89.00
1x4	C&Br VG Flooring KD	180-185.00
1x6	C&Br Drop Siding KD	155-160.00
1x6	C&Br S4S KD	170-175.00
1x8	C&Br S4S KD	170-175.00
1x10	C&Br S4S KD	175-180.00
1x12	C&Br S4S KD	215-229.00

Construction Timbers and Plank

3x12	6-20 feet	$ 95- 98.00
3x12	22-24 feet	100-103.00
3x12	26-32 feet	108-113.00
4x4	8-20 feet	96- 99.00
4x4	22-24 feet	101-104.00
4x4	26-32 feet	110-115.00
6x6	8-20 feet	95- 98.00
6x6	22-30 feet	102-105.00
6x6	32-40 feet	117-120.00
8x8	8-20 feet	94- 97.00
8x8	22-30 feet	99-102.00
8x8	32-40 feet	114-117.00
6x6, 8x10, 10x10, 12x12	8-20'	$92- 95.00
6x10, 8x10, 10x10, 12x12	22-30'	97-100.00
6x10, 8x10, 10x10, 12x12	32-40'	112-115.00

Construction Dimension (Green)

2x4	6-24 feet	$ 75- 77.00
2x6	6-24 feet	75- 77.00
2x8	6-24 feet	75- 77.00
2x12	6-20 feet	77- 79.00

Standard & Btr. Boards (Green)

1x4	6-20 feet	$ 62- 65.00
1x8	6-20 feet	73- 76.00
1x12	6-20 feet	71- 74.00

Douglas Fir Plywood

¼-inch AD SO1S $ 64.00

Southern Pine (KD Stock)

Vertical Grain Flooring

	BB	C	D
1x4	$215.00	$205.00	$152.00

Flat Grain Flooring

1x4	165.00	157.00	140.00
1x6	190.00	177.00	135.00

Drop Siding

1x6 No. 106	197.00	184.00	137.00
1x6 No. 116	197.00	177.00	137.00

Boards and Shiplap

	1x6	1x8	1x10	1x12
No. 1	$130.00	$132.00	$130.00	$175.00
No. 2	84.00	89.00	85.00	100.00
No. 3	73.00	82.00	80.00	81.00

No. 1 Dimension

	12	14	16	18	20
2x4	$107.00	107.00	107.00	119.00	119.00
2x6	101.00	101.00	101.00	116.00	116.00
2x8	100.00	100.00	96.00	115.00	115.00
2x10	110.00	112.00	107.00	125.00	125.00
2x12	115.00	112.00	112.00	125.00	130.00

No. 2 Dimension

	12	14	16	18	20
2x4	$102.00	102.00	102.00	115.00	115.00
2x6	94.00	94.00	94.00	111.00	111.00
2x8	95.00	93.00	89.00	108.00	108.00
2x10	98.00	98.00	91.00	107.00	110.00
2x12	96.00	96.00	97.00	115.00	120.00

Western Pine

Ponderosa Pine

Selects S2 or 4S	4/4 RW	5/4 RW	6/4 RW
C Select RL	$257.58	$259.28	$257.60
D Select RL	168.73	193.22	186.93

Shop S2S	No. 1	No. 2
5/4	$143.95	$112.84
5/4	145.74	114.27

Commons S2 or 4S	No. 2	No. 3
1x8" RL	$ 94.45	$ 73.90
1x12" RL	102.46	76.44
4/4 No. 3 Common S2 or 4S		$ 61.67

Idaho White Pine

Selects S2 or 4S	4/4 RW	6/4 RW
Choice (C) RL	$264.94	$294.03
Quality (D) RL	169.23	253.07

Commons S2 or 4S	Col. (1)	Ster. (2)	Std. (3)
1x8" RL		$122.63	$ 84.81
1x12" RL		144.40	93.97
4/4 Utility (No. 4) S2 or 4S RW&L			$ 66.50

Sugar Pine

Selects S2 or 4S	4/4 RW	5/4 RW	6/4 RW
No. 1 & 2 Clear RL	$280.20	$267.25	$274.95
C Select RL	269.12	262.74	265.17
D Select RL	193.34	198.75	201.95

Shop S2S	No. 1	No. 2	No. 3
5/4	$150.85	$115.27	$ 82.83
5/4	152.96	115.94	87.18
8/4	162.26	127.44	84.01

Larch-Douglas Fir

4/4 No. 3 Common S2 or 4S	$ 74.62
2x4 No. 1 Dimension RW&L	89.20
2x4 No. 2&Btr. Dimension RW&L	79.16

•

New Malayan Sawmill Has Ample Storage

A $250,000 sawmill at Petaling Jaya in Malaya will include a 180-foot long shed with a railway siding running through its entire length. A total of 30,000 square feet will be under cover in the project.

The plant is being built by General Trading Corp. (Malaya) Ltd., timber exporter, for Soon Huat Sawmills, Ltd., of which General Trading is managing agent. Construction will be of lumber, using roof trusses developed in Belgian. Lumber sheds will hold 75,000 cubic feet of sawn lumber.

Before the wood construction could be undertaken, city building regulations had to be relaxed.

General Trading Corp. operates a fleet of lorries to transport its graded timber from many sawmills scattered throughout Klang. Water shipments of the lumber from Port Swettenham go to Australia, the United Kingdom, United States, New Zealand, South Africa, Europe and other markets.

•

Southern Mill Damaged

The Scott-Hearn Lumber Co. of Turner County in Georgia, suffered extensive losses by fire in August. The sawmill was nearly destroyed. The planing mill and dry kiln were saved and are continuing to operate. No rebuilding plans have been determined.

New B. C. Sawmill

Celgar, Ltd., Vancouver, B. C., expects to start construction in early 1960 on a sawmill at Castlegar which will supply chips for a new pulp mill at the same location as well as produce lumber. Kiln and planing facilities are also planned. Work is underway on the pulp mill and attendant facilities.

OBITUARIES

JOSEPH W. SHERAR, 54, director of trade promotion for the Western Pine Association, died October 13 in a Portland, Ore., hospital after an illness of three months. Mr. Sherar headed the nationwide advertising and trade promotion program of the Western Pine industry since 1947.

Mr. Sherar started his lumber industry work with Potlatch Forests, Inc., Potlatch, Ida. He later worked in pine mills in Oregon and California and became a Western Pine Association grade inspector in 1934.

He joined the association's trade promotion staff in 1937, later worked in the association's research lab in Portland, Ore., and returned to trade promotion.

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Royal Steel Dry Kiln Truck Wheels are the best designed and strongest wheels that can be put under a load of lumber. They will wear longer, will carry heavier loads and will not crush or break.

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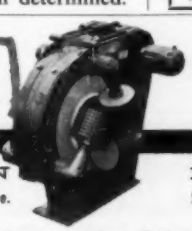

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8" 14" 21" 26" 35" 43"

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Fir plywood capacity will probably reach 9.6 billion square feet by the end of 1960, based on plants entering production in 1959 and those planned for 1960, DFPA president Bacon reported.

Plywood Problem: How to Sell 9.2 Billion Feet

Production of over 9.2 billion square feet in 1960 will mean that sales must be increased by better than ¼ billion square feet between now and December 1960, C. Henry Bacon, Jr., president of the Douglas Fir Plywood Association told subscribers at their annual meeting in Portland, Ore., early in October.

Mr. Bacon estimated 1959 production will reach 7.7 billion square feet, plant capacity 8.3 billion square feet.

President Bacon told the plywood men that "we have no more important business than finding answers to that problem, and I am here to suggest that DFPA is one of the answers."

More markets. Now 21 years old, DFPA's sole reason for existence, said Bacon, is to expand the markets for fir plywood. It is one of the largest, and probably the largest, promotional association in the country. It is perhaps the only one geared 100% to the expansion of sales, with its 1959 budget running over $5 million.

As DFPA income increases along with production growth, Bacon assured the executives, there will be definite plans formulated in advance for effective use of this new money. These conditions are anticipated. Plans for necessary additional expenditures are laid well in advance and presented to the management committee for decision.

DFPA now has 125 individual companies as members and employs over 250 persons, with 60 field representatives covering the entire country. Hopes are for another 20 men to be put in the field as quickly as economically feasible.

The fir plywood industry is now rated as the nation's fastest growing non-defense industry showing a 429% increase since 1949. This compares with plastics, 328%; aluminum 332%; and wood 113%, according to the Federal Reserve Board Index.

Bigger than fir lumber. "The fir plywood industry has grown to the point where this year it will probably exceed in dollar volume, the business done by fir lumber," said R. W. Agnew, chairman of the management committee of DFPA. He further observed that the plywood industry is growing up, becoming more unified. "It's going to take every bit of skill, everything we have to meet the competition of other materials," he said, but through DFPA "we can and will do the job."

2-house family. Biggest thing on the horizon and sweeping the country with unprecedented interest, is the idea of the two-home family, introduced by DFPA. "Within a relatively few years, the average American family will look upon the idea of two homes as a virtual necessity to their every day pattern of living," said W. E. Difford, managing director of DFPA.

"There's sales dynamite in this trend to two houses," Difford told the 250 plywood executives on hand. "Four years ago the idea was fantastic. Today it's a reasonable possibility and tomorrow it will be another major market for plywood."

Financing for the second home will be solved within the relatively near future, Mr. Difford said. "In 1960 you'll sell more plywood per house than you ever have in previous years," he predicted. It will be done with new structural ideas, component erector set systems, weddings with other materials that are coming out of the laboratory now, Difford told the producers, and this in spite of predictions of tight money and corresponding decrease in conventional home construction next year.

New members elected to the association's top-level management committee were: John Martinson, vice president, Puget Sound Plywood Co., Tacoma, Wash.; J. L. Buckley, vice president, Georgia-Pacific Corp., Portland, Ore.; Howard Lemmons, general manager, Edward Hines Lumber Co., Westfir, Ore.; Kenneth Morrow, general manager, U. S. Plywood Corp., Redding, Calif., and John Connors, general manager, Brookings Plywood Corp., Brookings, Ore.

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"PORTALLOY FLIGHT"
EASY INSTALLATION . . .
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"PORTALLOY is to chain as COPENHAGEN is to snoose"
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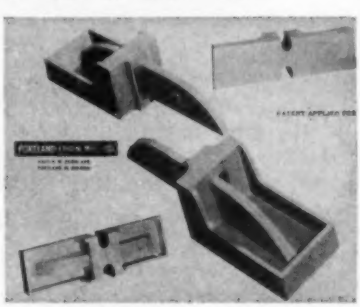

New Sheathing Plant In Northern California

Willamette Sheathing Corp., Arcata, is producing 3.5 million square feet of sheathing a month, 3/8-inch basis. The plant, in building space leased from Roddiscraft, Inc., went into operation in July, 1959. Forrest Dean is the plant superintendent.

Willamette is getting its green veneer from Roddiscraft.

The new plant has an E. V. Prentice cold press, a Coe Manufacturing Co. 16-section 5-line dryer with Jeddeloh Bros., Sweed Mills automatic feeder, Jeddeloh Bros., Sweed Mills, Inc. core veneer band saw, a Jointaper, two Raimann patch machines and a Farwest gas fired boiler.

The Willamette operation is adjacent to Roddiscraft's fabricating plant and under the same roof.

The green veneer comes from Roddis' main plant located elsewhere in Arcata.

• Coquille Valley Lumber Co. has started operation at its veneer drying plant in Albany, Ore. The plant will take green veneer from Coquille Valley's installation near Alsea, dry it, then ship it to the fabricating unit in Milwaukie. The installations will also do custom drying for other plants.

Northeast Plywood Plants Get New President

Allies E. Salls has been named president of Granite State Veneer, Inc. and Plywood Products, Inc., North Stratford, N. H. Both are subsidiaries of the Brown Co., Berlin, N. H.

Mr. Salls has been acting as executive vice-president and general manager of the plants since the Brown Co. purchased them in 1956.

Both firms produce yellow birch and hardwood veneer and plywood. Brown Co. supplies much of the log supply for both companies.

•

Old Habits Hard to Break

An article in the October issue of THE LUMBERMAN, describing the panel patching system of Aberdeen Plywood & Veneers, Inc., Aberdeen, Wash., called the firm Aberdeen Plywood Corp. THE LUMBERMAN editors are sorry. Apparently old habits are hard to break. The pioneer Aberdeen plywood producer was Aberdeen Plywood Corp. for many years until a fairly recent name change.

•

• Harbor Plywood Corp., will shortly open a new sales warehouse in Panama City, Fla., the fifth added by the firm since the first of the year.

work boat POWER!

Got a tough boating job? Here's the motor that takes it in stride—Evinrude's 1960 Big Twin! 40 horsepower at 4500 rpm. Big-load power that loves to work. It's as easy to pull over and start as most motors half its size—and thermostatic temperature control keeps it running at peak efficiency in any weather, on any water. Choice of props to fit boat and work. For constant, rugged duty, there's no finer outboard power—or more economical buy—than the stout-hearted Big Twin.

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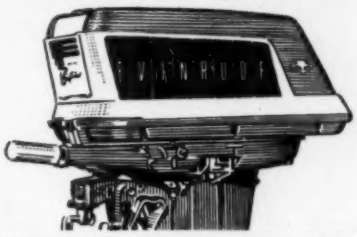

WINTON LUMBER COMPANY

PLYWOOD PLANT - MARTEL - CALIFORNIA

The Heavy Timber structural frame of this modern Plywood Plant was designed, fabricated and erected by us—and is Quality Guaranteed. The panelized plywood roof deck and plywood sidewalls were also installed by us. 100' and 120' trusses, with 40' carrying trusses, provide maximum clear floor areas for efficient production lines

TIMBER STRUCTURES INCORPORATED OF CALIFORNIA

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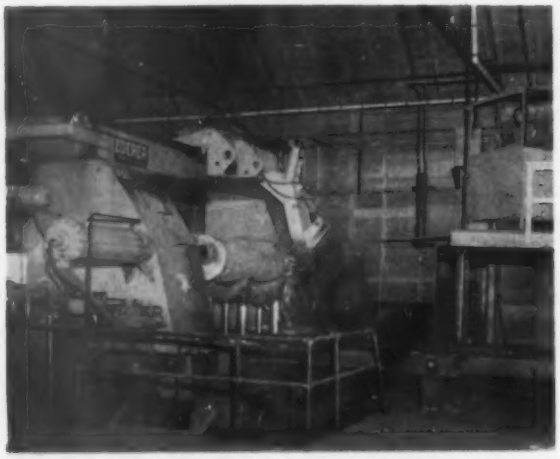
How Winton Lumber Co. Plywood Plant Operates

New plant at Martell, Calif., has 3½ acres under roof, a vast bank of steam tunnels, movable lights, latest equipment, and on two sides an air space between side walls and roof shell. Production currently is geared at 5 million feet a month on ⅜-inch basis, two shifts.

Except at positions of certain primary equipment which require subfloor surface components, the plant floor is unbroken. All other equipment is set flush and so may be moved with minimum difficulty when future design and production changes dictate new locations.

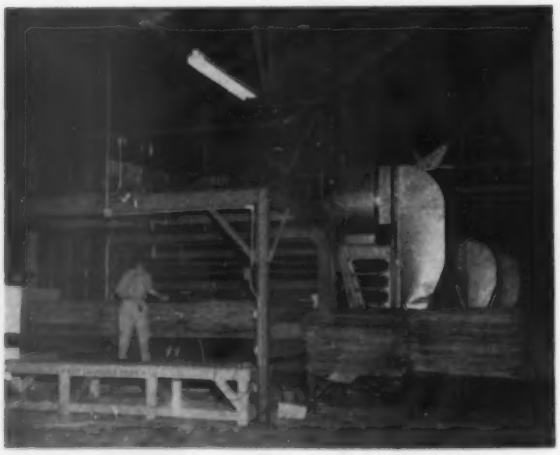
Actual production of plywood is no different, follows a conventional system. Production is 80% white fir, 20% Douglas fir. "The production's not unique," says Mr. White, "but we do have what is probably the most complete array of up-to-date equipment in the industry today under one roof."

He cites some of the features shown in the photos herein and also points out the strip flow systems on the dryers and hot presses; three Raimann patchers offbearing onto a belt system and regrading being done on the belts —thus allowing greater concentration on the jobs at the machines; and the one-man operation of hoist, trim and skinner saws and panel stacking.

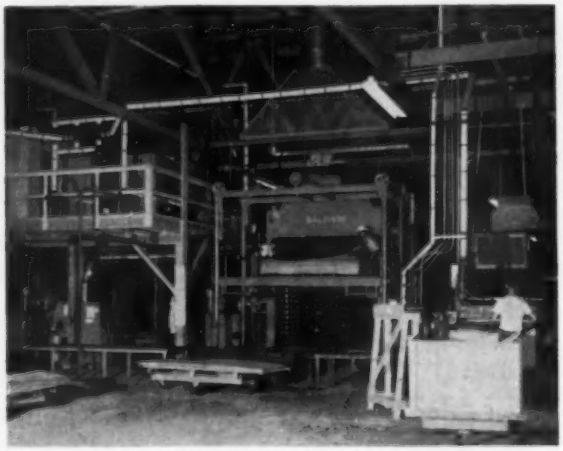


3 Barker is an Ederer 8-foot unit. Operator is located high and to one side of front of barker for maximum vision. Barked peelers move forward on powered chain to await removal by a fork lift.

4 Minimum time is lost in charging lathe as new peeler is always in charge position and another up on the yoke or on the way down. Peelers range from 20 inches to 6 feet in diameter.

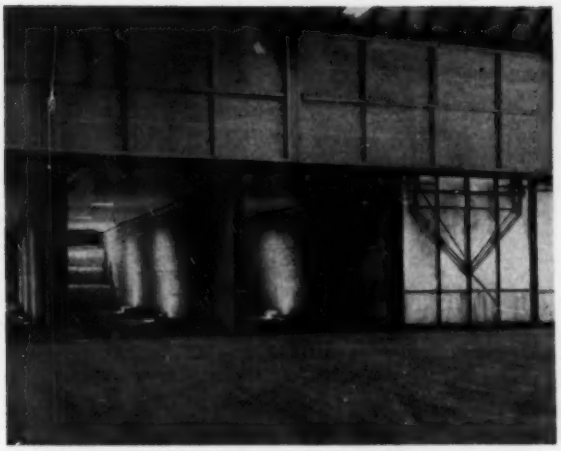


7 Two dryers are used. One is 18 sections and the other is 20 sections. Both are Coe steam units and have six lines. Both are equipped with Coe automatic feeders.

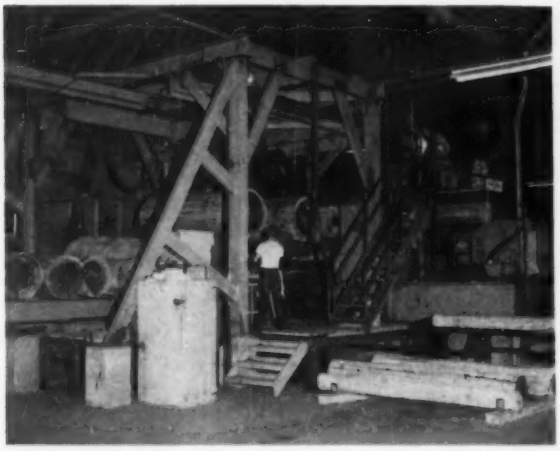


8 Two Baldwin, 20-open hot presses have overhead glue storage located between them. The three Globe spreaders are equipped with automatic levelers.

1 30-ton LeTourneau electric log stacker feeds live deck. Bucking is done just inside with L&M saw. Two Sumner 72-inch chippers are enclosed in building at left. Rader Pneumatic system transports chips to cars in left background.



2 There are 10 steam tunnels, in one bank. They are 70 feet long. Peelers are steamed at 120 degrees and held in tunnel for 16 hours. Better peel and improved knife service result. Tunnels are of cement block construction.



5 Lathe is 8-foot Coe, with Redco tipple system and Ederer charger. Note peelers on yoke, in charger and in chucks on the lathe. Charger is hydraulic. Lights are used to level blocks.

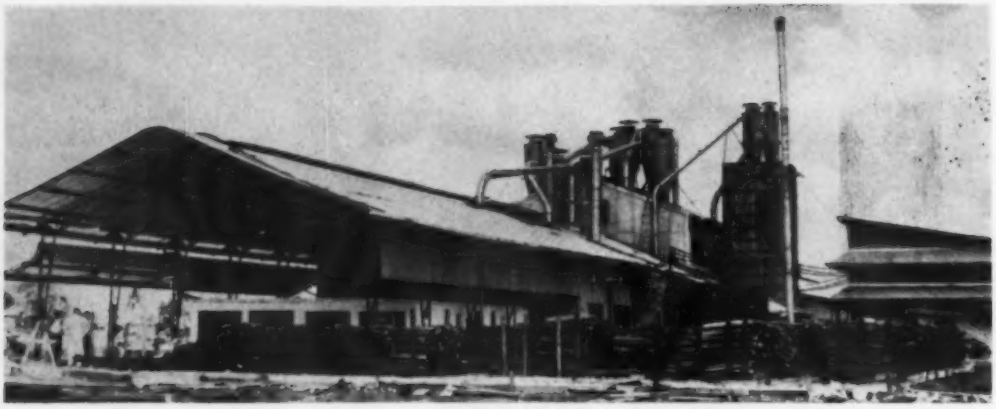
6 Six trays, 175 feet long, serve three Coe single-knife clippers. Coe controls are semi-automatic. Three clippers handle as much work as four in most operations. Offbearers feed stock into Kimwood Machine Co. pulling rolls and bins. Bins are on steel wheels and run on tracks. Offbearer can move the bin out by air pressure and foot pedal control, or lift truck driver can use overhead rope and pulley control without leaving the vehicle.

9 Timber Structures, Inc. of Calif. erected plant. Note clear span distances. One section has 100-foot clear span. Another section has 120-foot span. Carloading dock is at right. It can hold five cars under cover. Arrow points to extra electrical outlet. Fluorescent fixtures are plugged in, can be moved laterally 10 feet along trusses to meet changing needs in lighting.

Equipment

MANN-RUSSELL electronic moisture detector; GLOBE scissor lifts; GLOBE patch strip saw; WHEELER band core saw; FLUCKINGER glue mixer; GLOBE traveling jointer; MANN-RUSSELL electronic edge gluer; GLOBE hoist, trim and skinner saw and automatic panel stacker; PENINSULA IRON WORKS veneer hog.

YATES AMERICAN S800 8-drum sander, GLOBE 8-ft. belt sander; GLOBE shim cutting machine; CAPITOL dry clippers; KIMWOOD MACHINE CO. puller, bins; COE knife grinder; CALIFORNIA BLOW PIPE & STEEL CO., installed RADER PNEUMATIC blower and ventilating systems.



PLANT IS LOCATED on Demerara River. Wallaba logs in 4-foot and 4-foot, 6-inch lengths are brought in from the interior by barges.

British Guiana Plant Uses Hardwood to Produce

Highly automatic operation has annual capacity of 6000 tons of insect-proof,

Timber Developments (B.G.) Ltd., Georgetown, British Guiana, produces particle board in thicknesses from 1/16 to 1⅜ inches in its plant on the Demerara River about seven miles from Georgetown. Output is sold in British Guiana and the West Indies where the 3/16 and ⅜-inch panels are used for paneling, the ⅝-inch for structural purposes. Use of the material in prefabricated houses is being tested and early results are favorable.

Wallaba, a moderately heavy hardwood, is the raw material.

The plant is designed so that boards of either one or three layers can be produced on the same equipment. Smooth-faced boards are produced using fines or slivers on the surface. Decorative boards are achieved by using longer and wider chips.

The plant is highly automatic. Switchboards control machine operation from the chippers to the mixer and from the mixer to the board separating table behind the hot press.

Manufacture and use of particle board in a tropical country offer humidity and insect problems. As a result, the urea-formaldehyde used is specially made to meeting the humidity problem. Both glue and hardener are supplied in powder form to prevent deterioration before use. An insecticide is mixed with the glue to prevent attacks by termites.

Raw material. The Wallaba logs supplying the plant are barked and roughly sorted into two grades. Higher quality logs will supply particles for surface layers, lower quality for the core. Barked logs are split if too large. If necessary, the timber, though freshly cut, can be sprinkled with hot water to raise the moisture content and to remove sand and dirt.

Chipping and drying. Two production lines handle chipping, drying, screening and mixing of particles: one for surface particles and one for core material. This allows a variation of properties, quality and quantity of each production line according to market demand.

Logs are chipped, without resawing, by two chippers. A hammer mill reduces surface particles to smaller sizes. Two drum driers and two vibrating sieves further process chips.

Storage and mixing. All transport of particles from the chipping machines to distributor machines behind the two mixers is pneumatic. Predetermined amounts of particles are dropped into the batch mixers every three minutes. Glue mixture is sprayed on at the same time.

Glue is prepared in a room underneath the particle mixers and pumped by air pressure into a tank on the mixer platform from where it is drawn into the mixer. The glue mixture is designed to prevent presetting and to reduce pressing cycles.

Forming and pressing. The automatic forming line consists of conveyor belts, three distributing and felters, a cold pre-press and hydraulic hot press with charging and discharging equipment for the cauls.

Aluminum cauls are placed on one end of the forming line passing under the three felters. To ensure an even formation of the particle mats, cauls pass twice under each felter laying up surface and core in layers.

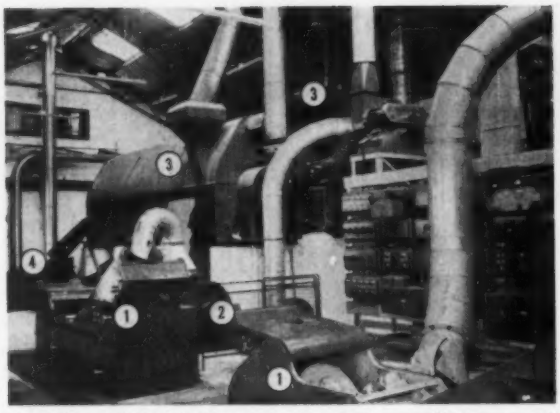
At the return point the mat is always checked by its weight. When the mat on the first caul goes forward again, the second caul is advanced automatically with it. Finally, the first caul with the mat enters the pre-press and the second caul returns to receive the second part of the mat.

The mat entering the cold pre-press is about twice the size of the ultimate thickness of the cured board.

Hot press. The 7-open unit is designed for later additions. Feeding of the press, and pressing, are automatic. During pressing time cauls in the feeder are refilled.

Finishing. Boards discharge automatically to the separating table. Cauls are stored in special carriages which are moved into a cooling chamber, then returned to the forming line. After four to six days of curing, boards are trimmed on all four edges and sanded and thicknessed by a three-drum sander.

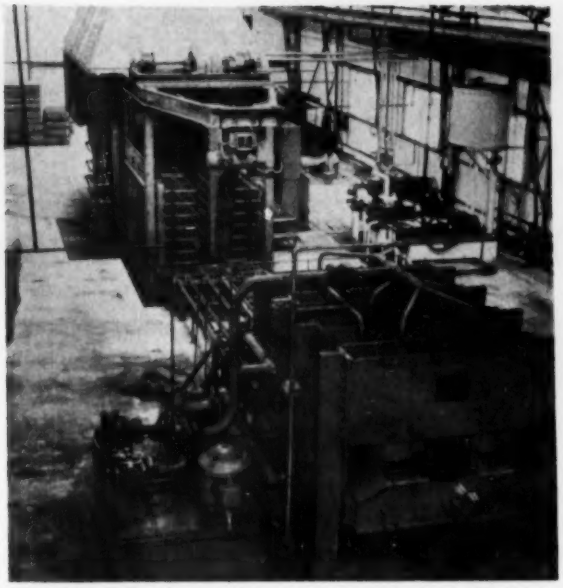
Housekeeping. Steam rising from the press is sucked away by fans. Particles which fall into the space between the cauls under the felters are pneumatically taken back to



CHIPPING AND MIXING sections includes 2 chippers (1), hammer mill (2), two drum driers (3) and vibrating sieves (4).

Particle Board for local use.

smooth and fancy-faced panels.



FORMING LINE includes cold pre-press, press charger and hydraulic cold press and conveyor belts which automatically serve the units.

the felters machines. Dust is sucked away from the saws and sander into a special waste bin together with the dust from the vibrating sieve. Wood residue is sprayed into a boiler in mixture with Bunker C oil and burned.

Power for the plant is supplied by a diesel generator.

Labor deployment is as follows:

Log yard—1 man and 2 helpers.

Chipping and drying—2 men.

Storage and mixing—2 men.

Forming and pressing—2 men and 4 helpers.

Board finishing—2 men and 4 helpers.

Also, a boilerman, toolsetter, a glue mixer and an electrician.

All employes, except the tool setter and electrician, were local people trained for the work by the consulting engineer.

The factory building is 400 feet long, 40 feet wide and has an average height of 15 feet to the gutter on the roof and 25 feet to the elevator mixer platform.

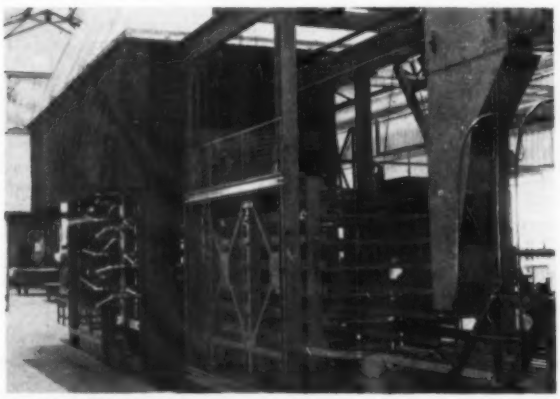
Cost of the plant, equipment and building, was $541,000.

V. J. Willems, chairman of Timber Developments, is also managing director of Willems Timber & Trading Co., Georgetown, which is the largest sawmilling and exporting firm in British Guiana.

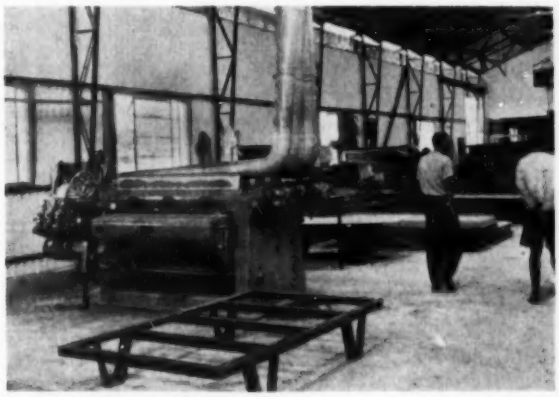
Other officers of Timber Developments inclue Peter Taylor, secretary and W. V. Brown, formerly with Airscrew Co. and Jicwood Ltd., Weybridge/Surry, England, plant manager.

Engineering and Equipment. H. F. Schwiertz, consulting engineer with Industrie Maschinen GMBH, Hamburg, Germany, engineered the plant. Conveying equipment and patented devices for forming on the cauls were made according to his specifications.

Other equipment, all German-made, includes Hombak K.G. chipping machines; Alpine A. G. knife mill; Ponndorf K.G. driers; Gebr. Lodige glue mixers; Behrens & Co. belt silos, forming station and all mechanical conveyors; Schroeter K. G. pneumatic conveyors; Friz pre-press; Siempelkamp & Co. hot press; and Boettcher & Gessner sanders.

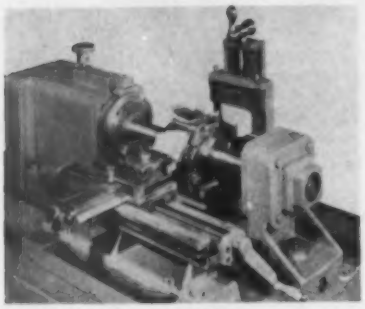


SEVEN-OPENING HOT PRESS employs a higher pressure than most because of the hardwood used. It is designed for future enlargement.



THREE-DRUM SANDER trims finished boards on all four sides. Boards with decorative surfaces by-pass this section of the plant.

MACHINERY AND EQUIPMENT



New Equipment For Cutterhead Conditioning

Mattison Machine Works, Rockford, Ill., announces a new No. 238 jointer and set-up stand for cutterhead conditioning. The spindle is mounted in three precision ball bearings, two of them being the reloaded type.

Precision mounting eliminates end play and vibration. The stone holder can be adjusted by handwheel and fine thread screw and can be located at any desired position.

The machine is equipped with template holder and tracing pin for jointing formed knives, a positive smooth acting spindle brake, reversing drum switch and safety cover over the "start" button.

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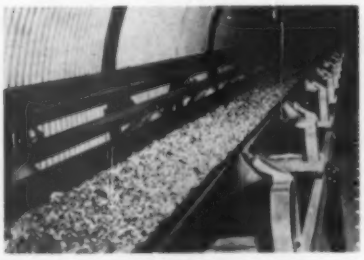

Conveyor Belt Capacity Upped with 45° Idlers

Manhattan Rubber division of Raybestos-Manhattan, Inc. says the benefits of 45° troughing idlers are now possible for handling all materials with its Ray-Man conveyor belts. Payloads of wood chips or bark can be increased 12% by use of the 45° rather than 20° troughing idlers, Raybestos-Manhattan, reports.

Ray-Man construction is doubly compensated so that the outer ply stretches as the inner ply contracts under both lateral and longitudinal flexing. This avoids the ply separation and belt failures at the "hinge" line where the belt bends between the bottom centering roll and the concentrating side rolls. R/M guarantees the Ray-Man against ply or cover separation at the idler hinge line in use with 45° troughing idlers.

Dip Protects Against Sugar Pine Brown Stain

Chapman Chemical Co., Memphis, Tenn., announces development of Bazide, a mixture of sodium oxide and selected buffering agents, which is designed to control certain stains in lumber, including brown stain.

Bazide is recommended for use with Permatox 10-S or Dowicide types of anti-fungus stain solutions. It is also being made available in a Permatox 10-S plus Bazide mixture for controlling both fungus blue stain and brown stain in white and sugar pine. Lumber and veneer should be dipped in the Bazide solution for several seconds immediately after cutting, according to manufacturers directions.

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Multiple Spindle Boring Machine Improvement Told

Ekstrom, Carlson & Co., Rockford, Ill., lists the following improvements in its ECCO No. 480 multiple spindle boring machine.

Any combination of holes at any spacing can be bored at the same time on either 6- or 8-spindle machine.

Single drill heads or cluster heads are available.

Chuck capacity is 1/16-inch to ½ inch.

Holddowns are fully adjustable and can be located anywhere.

Spindle speed is 3600 rpm.

Minimum distance between spindles is 2½ inches.

Chuck to table is 10 inches.

The 16x48-inch table is air-operated and has 4-inch lift or stroke with .3 to 60-second dwell or loading position.

Spindle motor of 1-hp—3600 rpm is required.

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• A. J. Gerrard & Co. is expanding to new quarters in Des Plaines, Ill. The new plant will house automatic equipment to manufacture flat and oval strapping and a complete line of tools and accessories.

Fuel Cell Electrical Power Drives Tractor

Allis-Chalmers Manufacturing Co. recently demonstrated a fuel cell-powered tractor at Milwaukee, Wis. The research vehicle developed at least 3000-pounds of drawbar pull.

The electricity that drives the tractor comes from 1008 individual fuel cells. There are joined in 112 units of nine cells each. The 112 units are arranged in four banks and electricity can be taken from any combination of the banks.

A mixture of gases — largely propane—fuels the cells.

The gases are fed into the cells through a system of tubing and, once in the cells, the gases react in an electrolyte. A catalyst coating the electrodes of each cell aids the reaction.

The chemical reactions within the cells cause a direct current to flow through an external circuit which is connected by bus bar to a standard controller.

The compact controller, measuring 8x11x21 inches, regulates the electricity supplied to a standard 20-hp D.C. motor.

The controller permits the tractor driver to regulate speed or reverse the tractor's direction by moving two levers. Using the speed control, the operator places the four banks of cells in series or parallel, varying the amount of current going to the motor.

To reverse the tractor, the driver moves the second lever, changing the polarity of the current flow to the motor.

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Aluminized Steel Extends Burner Life

Resistance to rust and other forms of corrosion and erosion is provided on Wilco refuse burners through the use of aluminized steel. Wilco Machine Works, Inc., Memphis, Tenn., manufactures the refuse burners in 10 different sizes built around three basic models. Sizes range from 15 feet in diameter up.

The burner is prefabricated for easy erection and can be shipped by rail or truck.

Wood Preserving Machine is Ready to Install

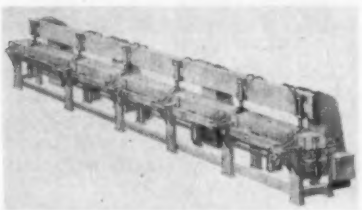
Osmose Wood Preserving Co. of America has developed a unit for pressure treating lumber which can be shipped as a unit to a mill and be quickly installed. Also, it is smaller than previous models, is 8 feet, 6 inches wide, 55 feet long. All a customer needs do to install is provide simple footings, a water line and electrical connection. The unit uses the same treatment system as its predecessor.

The new treating unit, called the Wizard, consists of a steam generator, control area, retort and storage mixing tank containing 4000 gallons of Osmosalts solution. The retort is 42 feet long, 48 inches in diameter complete with rapid-opening door designed for 125 pounds working pressure.

Maximum capacity of the retort is 5000 board feet.

Boiler for the Wizard is a 40-hp oil-fired steam generator complete with water makeup kit. Steam is baffled through an especially designed tank to reduce excessive noise.

The necessary water line must deliver 20 gallons per minute. The electrical connections require a 60 amp, 220/440 volt, 3-phase line with a neutral.



Peg Bundling Machine Straightens Lumber

H. M. Bennett & Company, De-Ridder, La., has developed a rig which clamps four 2x4's and up to four 2x12's in straight alignment from the top and sides, automatically drills ¼-inch holes from the bottom through the stack and inserts ¼-inch pegs in the holes to hold the bundles straight.

Crooked pieces put in a pile are turned opposite one another so that they automatically straighten each other.

Hydraulic pressure clamps the stock in true alignment. Number of holes drilled depends on length of stock: 3 holes in 8-foot length; 4 in 10 and 12, 5 in 14 and 16, and 6 in 18 and 20. Two men can bundle 20,000 to 24,000 feet of 2x4's in 8 hours.

Bundles are easily handled, pull apart easily on the job and the ¼-inch holes are not objectionable in dimension stock, Bennett reports.

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• Micro Switch, Freeport, Ill., a division of Minneapolis-Honeywell Regulator Co., has opened a branch office in Portland, Ore., to service customers in Oregon and southern Washington.

Engineering Symbols For Electric Typewriter

Remington Rand has developed interchangeable type heads which provides the many special characters needed in typing engineering material. The changeover involves the typeface only. The units snap into place in a simple operation and lock in place. A special magnetized tweezer is used.

The company has prepared a booklet containing the special symbols.

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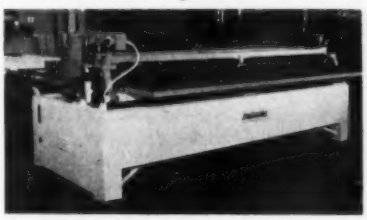
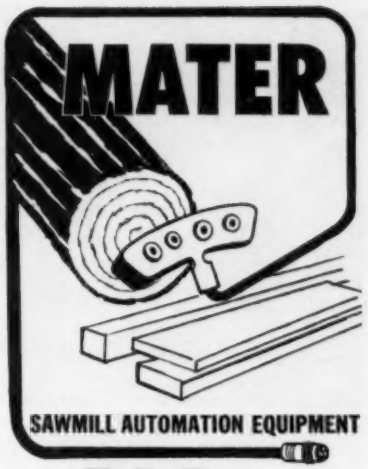


Unit Crosscuts, Rips Plywood, Board Panels

A new combination panel crosscut and rip saw from Multiscore, Inc., Seattle, Wash., is equipped with multiple heads and is designed to crosscut stock 4x8-foot panels. A machine to handle 5x10-foot sheets is available.

Material is fed through the saws by a combination of hydraulic and electrical power, both variable.

The machine is designed so that two stock 4-foot panels may be ripped lengthwise at the same time. Stock machines for 4x8-foot panels are equipped with six saws, all of which may be positioned or removed without disturbing the arbor.



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NEW WATERPROOF SURFACE COATING for plywood roofs, developed by Borden Chemical Co., was recently shown to company officials at the Borden Central Research Laboratory in Philadelphia. Dr. George Kitazawa, right, head of the forest products section at the lab, shows the new surface coating to Albert C. Simmonds, Jr., left, a company director and board chairman of the Bank of New York, and Theodore G. Montague, chairman of the Borden board. The Philadelphia laboratory coordinates the work of seven Borden department laboratories located throughout the country.

Stametz Organization Buys Sawmill Equipment Line

Northeast Ohio Machine Builders, Inc., Columbiana, Ohio, has acquired the resaw and band mill lines of Counsel Manufacturing, Inc. William K. Stametz, Jr., president of Northeast Ohio Machine, says this is the latest step in his plan to completely integrate all manufacturing facilities and products in Columbiana.

The acquisition does not include any of Counsel Manufacturing's physical plant or property. It does include all manufacturing and sales rights, patents, patterns, parts and design drawings for the sawmill line which will be moved to the Columbiana headquarters.

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In New Quarters

Metal Processing Co., Oregon, Ltd., has moved to new, larger quarters in Portland, Ore. The 20,000 square feet of space now available will provide ample area for manufacture of Metco inlaid saw bits and holders and deck and pond saw bars. The firm also manufactures hogs and chipper knives.

Industrial Firm Purchased

Warren & Bailey Corp., Los Angeles, Calif., has purchased The Goodyear Rubber & Asbestos Co., Portland, Ore., one of the oldest and largest rubber supply firms in the Pacific Northwest. Goodyear Rubber & Asbestos carries a complete line of standard and specialty mechanical rubber products and a general line of industrial supplies. Warren & Bailey recently purchased Harris Supply Co., also Portland, which will now be consolidated with Goodyear Rubber & Asbestos with the resulting firm to be called Goodyear Rubber & Supply Co. The new firm will be headed by Albert Tuch, chairman of the board and Lloyd F. Childers, president and general manager.

•

Ball-Type Marker

Speedry Products, Inc., Jamaica, N. Y., has developed a marking device that combines a ball-type instant valve-action head and a refillable polyethylene squeeze bottom container. It writes with a heavy lacquer-base opaque ink, available in white, yellow and black.

EXPANDED FACILITIES of Jeddeloh Brothers, Gold Hill, Ore., manufacturer of Sweed mill products include the new engineering room and design annex in foreground and an addition to the main structure at right. The firm produces the Speed-Feed veneer feeder, the Ven-Cor saw for cutting veneer core stock, a scissor-type power hoist and a new scrap chopper for cutting steel strapping.

PERSONALITIES

ROBERT CUSHMAN is new general sales manager of Norton Co.'s abrasive division. He is succeeded as sales manager of grinding wheels by W. ALEX MCCUNE. HERLAN T. PIERPONT becomes sales manager of abrasives succeeding GEORGE A. PARK who has retired after 50 years with Norton.

W. L. FIBBEN, formerly assistant sales manager for Frick Co.'s farm and sawmill division, has joined Soderhamn Machine Manufacturing Co., Talladega, Ala., as regional sales manager covering Pennsylvania, Maryland, Delaware, Virginia, West Virginia and North Carolina.

W. L. FIBBEN

D. R. MARCELL

DONALD R. MARCELL is new district sales manager in Washington and Alaska for Dayton Industrial Products Co., a division of Dayton Rubber Co. He will headquarter in Seattle, Wash.

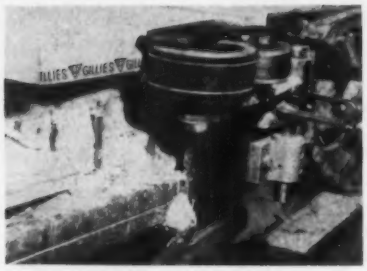
MARTIN J. TUCKETT has been appointed general sales manager of Greenlee Tool Co., Rockford, Ill. He joined the firm in 1957 as assistant to the vice-president in charge of sales. DELBERT WILSON becomes assistant sales manager.

M. J. TUCKETT

H. P. ROBB

To meet industrial growth in the San Francisco, Calif., area, Electric Steel Foundry Co., Portland, Ore., has named HALLE P. ROBB as manager of sales for all ESCO products and W. R. RICE as manager of sales of mill products. Robb will direct sales efforts in northern California, Nevada and Utah for all ESCO products.

KENWORTHY J. THOMPSON, with Chain Belt Co., Milwaukee, Wis., since 1946, has been named works manager of the firm's plants in Milwaukee County.



Printer Edge-Marks Lumber Automatically

The Conveyor Line Marking equipment developed by Automatic Marking Equipment, Inc., will apply a company brand name or species mark on lumber on the green chain at a point following the trimmer or button saws. Lumber moving on the green chains contacts and rotates the printing rollers which makes the desired impression. No additional labor is needed.

Speed of the operation is determined by the speed of lumber moving on the green chain.

Lumber marking ink capable of application on wet materials is available in most standard colors. About 30,000 linear feet of lumber can be marked with one pint of ink. An ink filling port installed on a hollow ink container with each unit facilitates replenishing supply. The ink container holds three ounces; an auxiliary system increases this capacity.

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Frick Company Merged With General Waterworks

Frick is now a subsidiary of General Waterworks Corp., Philadelphia, Pa., and its line of machinery is to be expanded. D. N. Benedict is retiring as president of Frick after 58 years with the firm. The new board of directors will consist of John M. Seabrook, chairman, and Howard Butcher, III, W. W. Keen Butcher, William H. Aubrey, Arnold E. Roschli and Joseph S. Stevenson, Jr. Mr. Aubrey becomes president.

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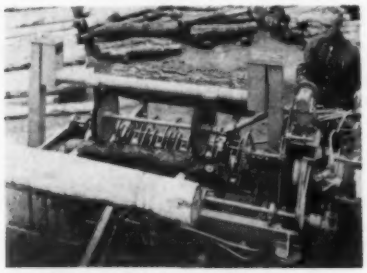

Portable Barker Handles Various Size Logs

The Porta-Peeler log barker manufactured by Improved Machinery, Inc., Nashua, N. H., is fed from the side, will handle from 2 to 4 cords an hour of logs ranging from 3 to 26 inches in diameter and from 4 to 10 feet long.

Operation is safe and simple. The operator nudges the log into the cradle where it is held by two sets of hydraulically-operated, driven rolls while the multiple cutterheads remove bark as the log turns. The pivoting cutterheads follow log irregularities, permitting bark removal with minimum wood loss.

The unit can be driven by a single gasoline or diesel engine or an electric motor. It readily mounts on any truck or trailer chassis.

Jackson Lumber Harvester Again in Production

Jackson Lumber Harvester Co. at Mondovi, Wis., has been organized to resume production of the Jackson Lumber Harvester, a portable sawmill, and also to make an all-steel portable edger, power units with custom built multiple drive speed reductions and other lumber harvesting equipment. The firm will also produce a line of woodworking equipment.

The Harvester requires only one trained operator who controls all operations from his position on the carriage.

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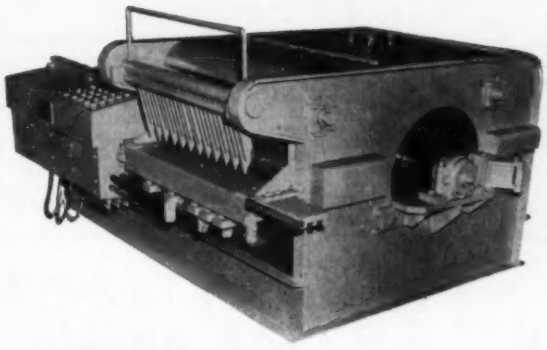

Peters new, highly accurate Push - Button Controlled Edger completely eliminates the possibility of mis-manufacture or mis-sawing. Maintains set between saws regardless of change in any other setting.

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Another operator (name on request) says his company rafts logs 50% faster with the Log Bronc.

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All steel welded construction for the toughest jobs. High powered outboard motor mounted for full 360 degree turns without reversing enables boat to push from all sides. Works in rivers, lakes, tidewater or ponds. Will save its cost in 90 days report many owners.
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Reichhold Chemicals, Inc., White Plains, N. Y.; Seattle; San Francisco; Port Moody, B. C.
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APPRAISALS
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General Appraisal Co., Seattle; Portland; San Francisco; Los Angeles; Spokane, Wash.; Vancouver, B. C.
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Rockwell-Standard Corp., Transmission Axle Division, Detroit, Mich.
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Filer & Stowell Co., Milwaukee; Portland
L-M Equipment Co., Portland, Oregon
Nicholson Mfg. Co., Auburn, Wash.
E. V. Prentice Co., Portland, Ore.
Sumner Iron Works, Everett, Wash.; Vancouver, B. C.
Soderhamn Machine Mfg. Co., Talledega, Ala.; Portland, Oregon
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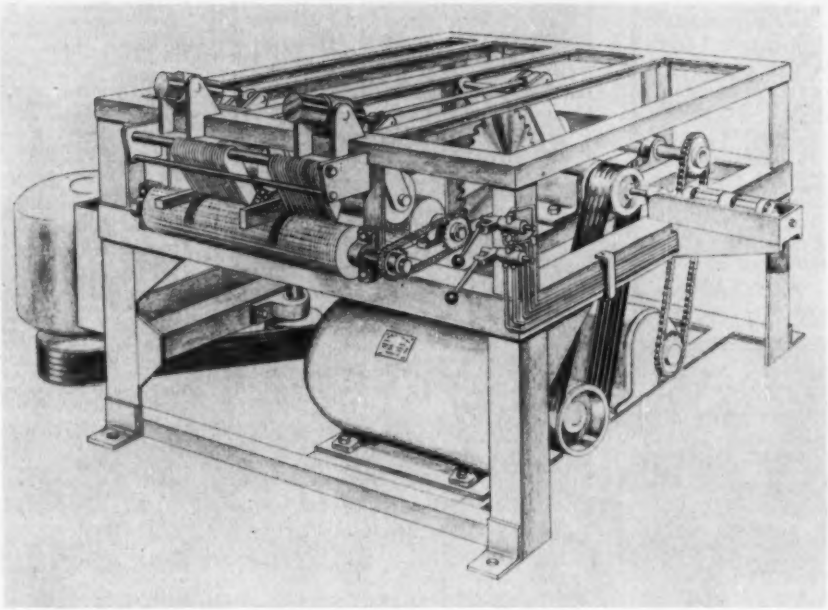

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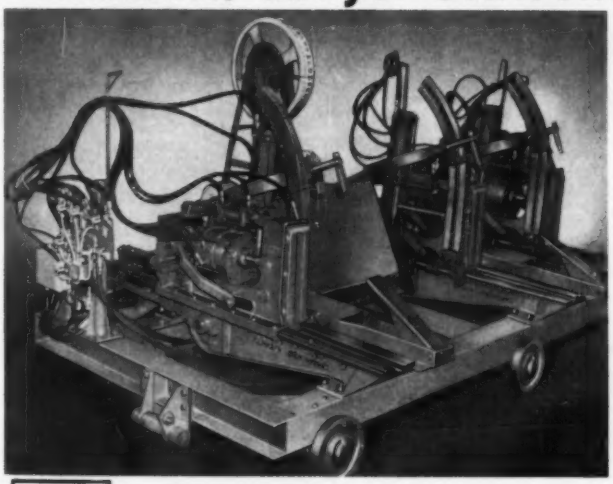

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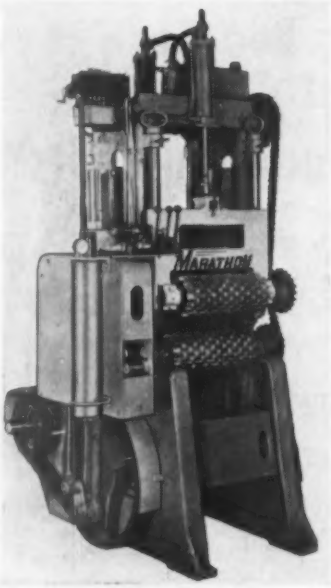

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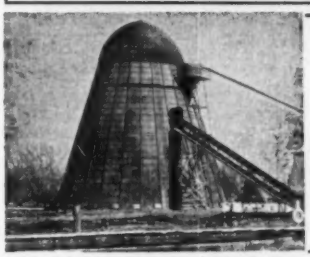

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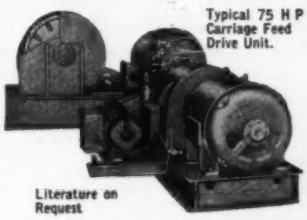

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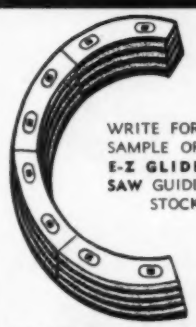

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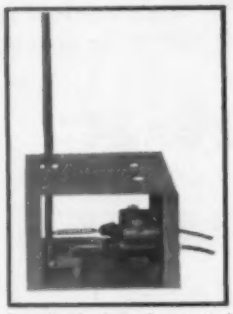

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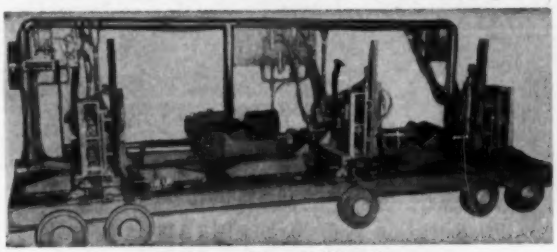

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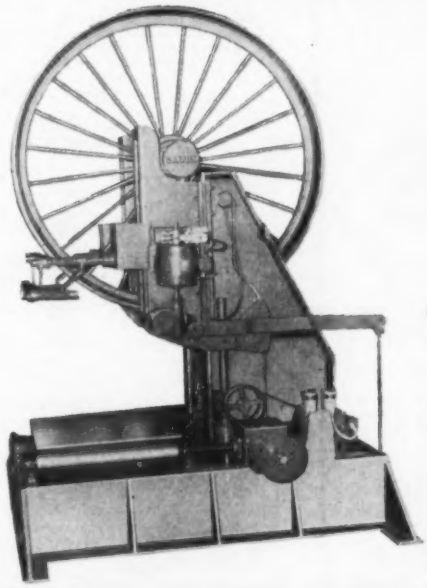

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2¾" Daylite
Working Pressure 200 PSI
Platens 1½"—10 Hydraulic Rams
Foxboro Temperature and Pressure Controls
Raynor Manufacturing Co. Dixon, Illinois

FOR SALE

Yates-Am A-62 15" P & M B D 8 K Prof
Yates-Am A-66 15" P & M Dir Elec 8 K
Yates-Am A-20 15" P & M B D 6 K Prof
Yates-Am A-20 20" P & M Dir Elec 6 K
Woods #412 15" P & M B D 8 K Prof
Woods 412 M 15" P & M Dir Elec 6 K

R. K. HASKEW & CO., INC.
Phone Amherst 6-6214 Box 4065
Chattanooga 5, Tennessee

FOR SALE

Moore 8 ft. wide, 16 ft. long Chain Arm Lumber Stacker. Never used. Can be seen completely assembled. $3000.00 under list price.
NORTHERN LUMBER CO., INC.
POLAND, N.Y.

"The Right Key" to Stop Tramp Metal Damage in Chippers and Hogs

RENS *electronic* **metal detector**

GOOD MACHINERY BUYS

Sawmill Machinery

24' wheel trimmer B.B. on steel beam
70' steel log haul conveyor
2 log hauls—330' 1½x6 chain, each
2 log kickers, 10"x22" air cylinder
Simonson Turner—2—12"x96" cylinders
2 log kickers, 14x36 cylinders
Log Stop—4 15/16" shaft, 14"x20" cyl.
Log Stop—4 7/16" shaft, 14"x20" cyl.
Gang 36"x20" stroke, "Record"
Gang 26"x20" stroke, "Record"
Edger 10x60 Phoenix, ball bearing
Slasher, 5 saw, 4' spacing
14"x18" steam feed engine geared

Motors

HP	Speed—Volts
1—500	—3600—2300 CW
1—500	—3600—2300 Ind. WH
1—450	—3600—2300 WH
1—400	— 300—2300 Syn. GE
1—200	—1200— 440 Ind. GE
1—200	—1200—2300 Syn. GE
1—200	— 900—2300 Syn. GE
1—200	— 514—2300 Ind. GE
1—200	— 500—2300 Sr. GE
1—150	—1800— 440 Ind. FM
1—125	—1200— 440 Ind. WH
4—100	— 900— 440 Ind. WH
5— 75	— 900—2300 Ind. WH
1— 75	— 720— 440 Ind. GE
1— 75	— 514— 440 Sr. GE
1— 40	—1800 440 Ind. GE

Roll Cases

Steel frames, Roller chain driven
6—10x24x2 7/16"—1½" P
5—10x30x2 7/16"—1½" P
6—10x30x2 7/16"—1½" P
7—10x60x2 7/16"—1½" P
15—6x20x1 15/16—1¼" P
10—6x20x2 3/16—¼" P Concave

Misc.

Chipper, 72"—10 knife Carthage with 400 HP, 300 RPM 2300 V. Synch. Motor
Band Rip Saw, Yates R4—54"
Worthington Twin Horiz. 2 stage, 393 cu. ft. Air compressor
IR 315 CFD air compressor, 75 HP motor 440 V w/V belt drive 368CF
IR 12x10 ER1 Air Compressor
#94 Berlin 6 knife planer 6x9
#404B Woods 6 knife planer 6x15
#207 Madison rip saw
Master S & W dragsaw, 20 HP motor
Lincoln 300 Amp gas driven welder
Ray Burner 400 HP turbine driven
Irvington Trim Saw #26, 3 HP Mtr., ¾ HP swing motor
#150L Covel grinder w/72" clamp
#18 Armstrong Grinder
5 electric panels, magnetic starters and disconnect switches 440 V
Lathe, Lodge & Shipley 20" Swing 12' centers

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GOLDSTEIN & BLOCH

SAW MILL MACHINERY

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Will sell outright or will operate on contract the following:

6 Model 548 Kenworth off-highway log trucks with Page trailers.

Equipped with: 4600 Timken axles; 12x24 rubber; 80 series transmissions; 300 Cummins power; 50M trailer axles. Complete with spare, drop-in units and parts.

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Phone HI Ilcrest 7-7343

MYERS POLE SHAVERS

Electric drive with Hydraulic head lift and Pole feed controls. Also skid mounted for engine driven portable use in the woods.

Claude Myers Troy, Montana

1—(Used) J-43 Merritt Traveling Head, Veneer Jointer Complete —202" cutting length, Ser. #4281. Excellent condition. Wire, write, phone for special price.

wilco machine works, inc.
Municipal Airport • Memphis, Tenn. • WH 8-4555

The Lumberman's Classified Advertising Section

For Sale

PLYWOOD SANDER

(Due to Closing of Millwork Plant)

49" YATES 8-drum, direct motor drive ea. drum, complete with electric switches, starters, blowpipe, hoods.

Real accurate machine.

BURKE MACHINERY COMPANY
P. O. Box 1930
Seattle 11, Washington
MElrose 2-0124 CHerry 2-2902

Experienced currently employed lumberman in market for position as manager or comptroller. Particularly interested in So. Oregon, Sierra, Inter-Mountain or Rocky Mtn. areas. Thorough background in cost control and administration as well as general management.

Write TL Box 412, c/o THE LUMBERMAN, 731 S. W. Oak Street, Portland 5, Oregon

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WANTED—Sales Representative with proven following for line of veneer knives well accepted in the trade. Competitively priced. Liberal commission basis. State desired territory.

COSTA INTERNATIONAL CORPORATION
2315 Broadway, New York 24, N. Y.

WANTED: MANAGER — MEDIUM SIZED LUMBER OPERATION. ROCKY MOUNTAIN AREA. MUST BE THOROUGHLY FAMILIAR WITH LOGGING, MILLING AND SALES. STATE EDUCATION, EXPERIENCE, FAMILY STATUS AND ANNUAL SALARY REQUIREMENTS.

Write TL Box 417, c/o THE LUMBERMAN, 731 S. W. Oak Street, Portland 5, Oregon

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Wanted to buy:

USED BACHMOBILE PORTABLE SAWMILL WITH OR WITHOUT POWER UNIT OR ELECTRIC SET CARRIAGE.

H. Smith Lumber Company, Pagosa Springs, Colo.

PLANER FOR SALE

Woods 412M 15"x8" motorized, ball bearing planer and matcher with feed table, top profiler and 8-knife cylinder. Current model, used only about 3 years.

HARRY G. BLAKE
P. O. Box 327, GEARHART, ORE.
Ph. Redfield 8-5444

FOR SALE—Japan-sawn Philippine hard-textured lumber, quality "as is." 65M A.D., 15 M K.D., all 5/4"x10", random lengths, minimum 8', avg. 12'. All or none. Price idea, combined, $130.00. Available Longview. For inspection contact Scarburgh Co., Inc., 150 California St., San Francisco, Calif., EXBROOK 2-8268, TWX 1248.

WANTED:

Short veneer lathe, 36-48 inches. Submit offers with description, weight, price.

CALIFORNIA SEPARATOR CO.,
1525 Fishburn, Los Angeles 63.

GENERAL MANAGER

Capable planning, scheduling work, handling men. Experience in Production and Cost Control. Must be good administrator and work with Budgets for pond, sawmill, and planer mill and office. Give complete resume of experience, personal data and salary requirements first letter.

Reply to TL Box #418, c/o THE LUMBERMAN, 731 S. W. Oak Street, Portland 5, Oregon

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SALES PERSONNEL WANTED

Two positions open with Soderhamn Machine Manufacturing Co., Talladega, Alabama. One position with location at Jackson, Mississippi, or Shreveport, Louisiana, to sell complete line of Pettibone Mulliken Cary-Lift Loaders, including Log Skidders, and economy pulpwood and whole log rotor debarkers. Other position open for same line with location in southern Georgia or northern Florida. Experience in sawmill or pulpwood production necessary. Written applications only, stating present position and experience.

Write TL Box #414, c/o THE LUMBERMAN, 731 S.W. Oak St., Portland 5, Oregon

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WANTED TO BUY

Good, used, late model cant gang saw. Prefer 18" to 24" opening. In quoting give detailed description, age and serial number.

NORTHERN LUMBER CO., INC.
Poland, N. Y.

EQUIPMENT FOR SALE

1—S. A. Woods motorized 132 BM 10" 5-head moulder, frequency changer, head equipment.
3—45 Diamond hogs.
1—V-60 Yates-American Resaw with pilot wheel
1—Portland Iron Works 24' Sawmill trimmer
1—Irvington 20' planing mill trimmer
1—Ross 90 Carrier
1—Complete 35,000 ft. a day sawmill for liquidation
1—Mershon 46" Twin Vertical Resaw
1—Filer & Stowell 8' ball bearing band mill
1—Ross 15 HT Lift Truck, 15,000 lb. capacity

New General Machinery Company Feed Tables and Ripsaws from Stock.

GENERAL MACHINERY COMPANY —or— **BADER MACHINERY COMPANY**
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Portland 6, Oregon — Spokane 31, Washington
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Distributor Yates-American Machine Company
Head and Knife Equipment
Write for our complete list of equipment **Write . . . Wire . . . Phone**

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1 car 8' S2S Oak stacking sticks 8c each. Cars of 12x12 sound squared rgh green Oak $77.50. Please phone or wire your orders.

GAIENNIE WHOLESALE LUMBER, INC.
P. O. Box 1774, Shreveport, La. Phone 5-4261

WANTED: COMBINATION SAWMILL FOREMAN AND MILLWRIGHT. MUST BE GOOD PRODUCER. WRITE EXPERIENCE, SALARY REQUIREMENTS AND REFERENCES.

Write TL Box 416, c/o THE LUMBERMAN, 731 S. W. Oak Street, Portland 5, Oregon

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EXPERIENCED LUMBER EXECUTIVE

Successful General Manager desires position. Excellent background in organization and administration of all phases of timber purchasing, logging, lumber manufacture, office procedure, sales, union contracts, etc.
Resume and letters of reference on request.

Write TL Box #408, c/o THE LUMBERMAN, 731 S. W. Oak Street, Portland 5, Oregon

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FOR SALE

One used plywood panel sizing unit $9,500.00.

Write or call Cascade Saw & Machinery Co.
Chehalis, Washington

WANTED: MANAGER—LUMBER MILL—INTERIOR BRITISH COLUMBIA. MUST ALSO KNOW GOOD FORESTRY PRACTICES AND LOGGING. SUMMARIZE EDUCATION AND EXPERIENCE.

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Available Immediate Shipment
200,000 pcs. 1/4 x 6 7/8 x 14 3/16
Clear KD Glued-Up Ponderosa S4S, Equ.

15,000 pcs. 1/4 x 13 5/8 x 13 5/8
Lauan Plywood, Sound Both Faces.

J. E. Gurvitch Lbr. Co.
Chicopee, Mass.

FOR SALE:

1 40" Whitney #24 Ball Bearing Double Planer. Coupled Motor Drive with 30 H.P. Motor on top head and 20 H.P. motor on bottom head, with four knife round cutterheads, two sectional infeed rolls,—2" sections,—sectional chipbreaker, complete with all jointing and grinding equipment, hoods, starters. Excellent condition.

Write TL Box 411, c/o THE LUMBERMAN, 731 S. W. Oak St., Portland 5, Oregon

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FOR SALE—COLUMBIA 12-OPENING HOT PRESS

50x100" platens, 2½" daylight, complete with Automatic loader and unloader. Can be inspected in operation. Price $42,500.00.

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TROPICAL WOODS

American citizen, college education, 31 years old, fluent Spanish, eight years experience in tropical logging and sawmill operation wishes to connect with firm that wants to obtain logs or lumber from Central or South America.

Write TL Box #413, c/o THE LUMBERMAN, 731 S. W. Oak Street, Portland 5, Oregon

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LIQUIDATION

Heavy Duty Sawmill, Planing Mill, Box Plant

SAMPLE ITEMS

Dbl. 8' Allis Bandmills
500 KW G.E. Turbine Generator complete only $5000.00
72" Edger, 4 Coleman rolls $1200.00
2-Y-A A-62 PLANER & MATCHERS
Nailers, Blower Systems, Twin Resaw

BARGAINS *Write or call for complete list* **BARGAINS**

Palmer Machinery Company

Box 7188-L, Jacksonville 10, Fla. **EV 8-0788**

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WANTED—Structural engineer-draftsman for plywood component manufacturer. State training, age and experience. Salary open.

Write TL Box 420, c/o THE LUMBERMAN, 731 S. W. Oak Street, Portland 5, Oregon

WANTED

Winch to fit TD-6 International Crawler. Must be in good shape and reasonable.

Write: Wayne Netestine Box 56 Mongo, Indiana

USED PLANING MILL MACHINERY

HARRY G. BLAKE

P.O. Box 327 Gearhart, Oregon
Phone—REdfield 8-5444

FOR SALE: 1 car 8/4 #2 Magnolia $84.00; 1 car 8' Red Cypress stacking sticks 10½c ea; Please phone or write your order. **GAIENNIE WHOLESALE LUMBER, INC., P.O. Box 1774, Shreveport, Louisiana.**

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15"x8" Woods 412-M 8-knife elec. planer with double profile, head, feed table. Age 3 years — excellent buy.
15" Woods 412-M 10-knife, equipped as above.
15" Woods 412 ball brg., b.d., dbl. profile.
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9" Stetson-Ross planer, belted, good, $1500.00.
20"x8" Stetson-Ross 8-knife timber sizer.
16"x30" No. 4 Stetson-Ross timber sizer.
24' Irvington 10-saw automatic trimmer.
10-opening Siempelkamp hot plate press.
49" 8-drum sander, Yates, motor driven.
4'x8' Black Bros. elec. cold press, M.D.
6" #272 Mattison electric moulder.
10" #134BM Woods 5-head electric moulder.
16"x6" Yates-American electric moulder.
12"x60" I. W. Johnson edger, like new.
14"x40", also 12"x32" Wickes cant gang saws.
4 Moore cross circulating dry kilns.

TYEE MACHINERY COMPANY

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FOR SALE

One Vonnegut Diehl Moulder 8 inch with a GE 33KW frequency changer with Hopper Self Feed. Complete with round heads. Completely rebuilt—$6,500.00 f.o.b. Moberly, Missouri.

One Mattison 12 inch Moulder. Model 226B. Complete with all round heads. Machinery has been completely rebuilt and in A-1 condition—$5,000.00 f.o.b. Moberly, Missouri.

ROBERTSON MANUFACTURING COMPANY
Phone AM 3-3378 Moberly, Mo. P. Box 688

MACHINERY FOR SALE

1 Mershon 42" twin box resaw in runable condition.
1 Beveler with top and bottom heads. Feed rolls run separately from heads. Good shape.
1 Dependable knife grinder, Model 99-85, Serial #A 546 with 1½ HP motor. Condition fair.
1 Side-head grinder with ⅓ HP motor. Condition fair.
1 Goff Cleat Machine, #3, 15 HP motor with ¾ HP Vari-Speed feed. Top condition.
1 100 HP, 1750 RPM ball-bearing motor, 440 Volt, 3 phase. Good condition.
1 Greenlee table power rig saw, Babbitt bearing with 25 HP motor. Condition fair.
1 77A, 19", 8 knife American planer with motor, feed table and blower system. Condition good.
1 #46, 20", 8 knife Berlin planer and matcher, ball-bearing side-heads with 100 HP motor, feed table and blower system. Condition good.
1 #284, 54" Berlin resaw, outside roller bearing on bottom wheel. Good condition.

No reasonable offer will be refused. Terms.

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has developed and can offer, complete equipment for Chip Board production from waste lumber (slabs), veneer cores, shavings, etc.—from all kinds of timber. This is horizontal press type production very attractively priced. Manufacturer will set up equipment for operation with complete guarantee.

Write for full information to:

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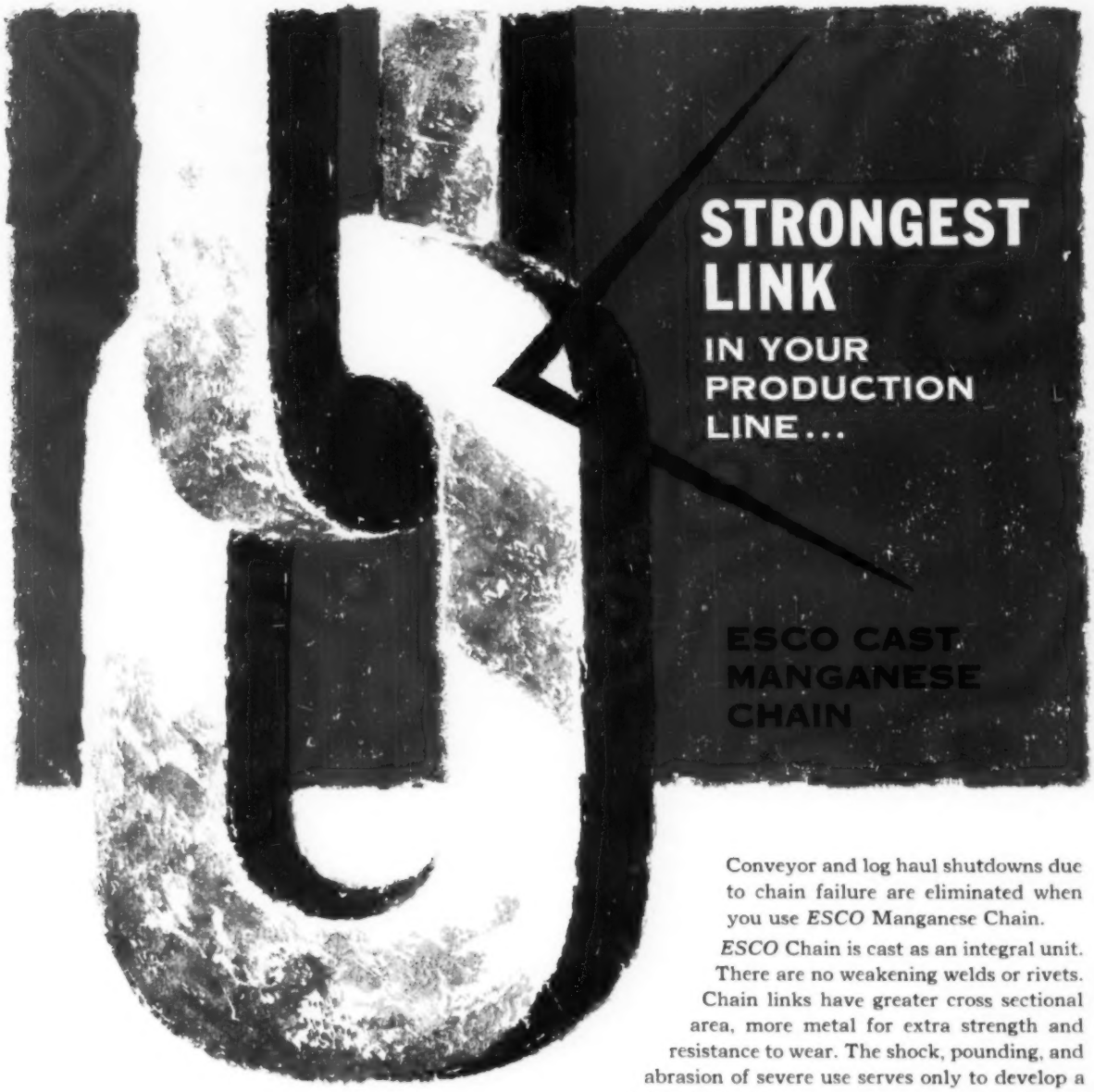
155 King Street East, Toronto, Ontario, Can. Tel: EMpire 8-3884

"The House for all types of special machinery in the Woodworking Field"



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ESCO CAST MANGANESE CHAIN

Conveyor and log haul shutdowns due to chain failure are eliminated when you use *ESCO* Manganese Chain.

ESCO Chain is cast as an integral unit. There are no weakening welds or rivets. Chain links have greater cross sectional area, more metal for extra strength and resistance to wear. The shock, pounding, and abrasion of severe use serves only to develop a polished, highly wear–resistant surface on *ESCO* Manganese Chain. Twenty-five years in supplying uniform, high quality chain to the lumber industry is your guarantee of trouble-free service.

For details on *ESCO* Chain, Conveyor Flights, Log Haul Chairs, Sprockets, Drums, Nigger Bars and Carriage Wheels, contact your nearest *ESCO* Sales Office.

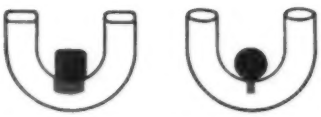

Diagram shows full bearing area of *ESCO* Chain contrasted with single point contact of round link chain.

ESCO Chain averages 19% greater cross sectional area than round link chain.

ESCO®

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MFG. PLANTS AT PORTLAND, ORE. AND DANVILLE, ILL.
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Any CHIPPER does a better job with HOE-J&O "BONUS BUILT" CHIPPER KNIVES

Hoe-J&O Chipper Knives are engineered to fit the job, available in all patterns, styles and sizes with single or double bevel. They are accurately ground after hardening, carefully sharpened and honed.

P-3

Large custom-built 24" diameter J&O waferizing head for the high-speed, precision production of chips for particle board manufacture.

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HOE-J&O Knives are built to fit all makes of chipping machines. They're made from our own special analysis steel, precision heat treated to stand up under the heaviest possible feed and produce uniform chips, while assuring maximum safety in operation.

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